

# COMPETITION IS A SIN: AN EVALUATION OF THE FORMATION AND EFFECTS OF A NATURAL GAS OPEC

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## I. INTRODUCTION

*"Competition is a sin."*

- John D. Rockefeller

A monopoly is nothing but a magician's trick—an illusion where producers artificially control supply to maintain the perception of scarcity.<sup>1</sup> While the Organization of Gas Exporting Countries (OPEC) has successfully maintained control over crude oil prices, the question arises whether a similar organization will form to control the natural gas market.

Monopolies are not a new international or domestic phenomenon. During the late nineteenth century in South Africa, DeBeers founder Cecil Rhodes recognized that if diamonds became commonplace their value would decrease substantially.<sup>2</sup> The diamond industry was consolidated under Rhodes's influence, and the international diamond cartel has since regulated the diamond gemstone market and maintained the fragile illusion of scarcity.<sup>3</sup>

Seventy years before the birth of OPEC the legendary Standard Oil controlled 90% of the petroleum industry.<sup>4</sup> The ubiquitous company was the impetus for American antitrust legislation under the Sherman Act, and its dissolution would create the seven sisters: Exxon, Mobil, Chevron, Marathon, Amoco, Conoco, and Atlantic Richfield (ARCO).<sup>5</sup> Ironically, it would be the offspring of Standard Oil that would act as a catalyst in the creation of OPEC.

This paper will analyze the effect of an Organization of Gas Exporting Countries (OGEC) that is already in the process of forming.<sup>6</sup> Part II of this paper details the creation of OPEC and compares it with the formation of OGEC; part III discusses the high demand of natural gas and how it affects the rise of OGEC;

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1. See generally DEBORA L. SPAR, *THE COOPERATIVE EDGE: THE INTERNAL POLITICS OF INTERNATIONAL CARTELS* 40 (Cornell Univ. Press 1994).

2. *Id.*

3. SPAR, *supra* note 1.

4. BRUCE BRINGHURST, *ANTITRUST AND THE OIL MONOPOLY: THE STANDARD OIL CASES* 43 (Greenwood Press 1979).

5. ERIC V. THOMPSON, UNIVERSITY OF VIRGINIA, *A BRIEF HISTORY OF MAJOR OIL COMPANIES IN THE GULF REGION*, available at <http://www.virginia.edu/igpr/APAG/apagoilhistory.html> (last visited Mar. 5, 2006) (noting that currently, Exxon and Mobil have merged, Chevron has merged with Texaco, Amoco merged with BP, Conoco merged with Phillips, and ARCO was also acquired by BP).

6. See *The Future's a Gas*, *ECONOMIST*, Aug. 28, 2004, at 53 (referring to Organization of Gas Exporting Countries or OGEC).

part IV describes the challenges facing OGEC formation; part V discusses options for OGEC structure; part VI analyzes the effects of OGEC formation; and part VII discusses strategies for the prevention and mitigation of OGEC establishment. Finally, although this paper discusses international effects, it will focus mostly on the United States.

## II. FORMATION OF OGEC

*"[A] little-known, four-year-old organization called the Gas Exporting Countries Forum . . . says it wants to promote cooperation with gas-consuming nations and 'does not seek to control . . . pricing and supply' . . . . That's exactly the line of inquiry that led to the formation of [OPEC] . . . ."*<sup>7</sup>

OPEC began with a secret meeting over fourteen cents.<sup>8</sup> In 1959, five countries gathered together in Cairo to discuss their lack of sovereignty over their natural resources.<sup>9</sup> These countries were troubled by the fact that the major international oil companies had built huge financial empires by exploiting their hydrocarbon resources while the governments received a meager royalty.<sup>10</sup>

The delegations of several countries were noncommittal; both Venezuela and Iran attended as observers.<sup>11</sup> Iraq did not even have an official delegation because of its hostilities toward Egypt.<sup>12</sup> Yet, out of the disarray emerged an agreement to create an Oil Consultation Commission (Commission).<sup>13</sup> The Commission's purpose was to resolve the countries' unfair treatment by foreign oil companies and the lack of control over their oil reserves. They agreed to establish national oil companies, since at that time only Iran had its own.<sup>14</sup> Most importantly, they approved the "national coordination of the conservation, production and exploitation of oil resources."<sup>15</sup>

The pact was kept secret from outside countries and even within the signatories' own countries the pact was not disclosed.<sup>16</sup> In Iran, the National Iranian Oil Company had no knowledge of the Commission's creation.<sup>17</sup> Operations within the countries took place; Venezuela established an embassy in Cairo and the members studied the Texas Railroad Commission to examine the intricacies of oil production programming.<sup>18</sup>

On one fateful day in August 1960, Esso<sup>19</sup> reduced the posted price of

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7. Peter Coy & Jason Bush, *And You Thought Oil Was A Worry*, BUS. WK., May 2, 2005, at 36.

8. IAN SKEET, *OPEC: TWENTY-FIVE YEARS OF PRICES AND POLITICS* 1, 15 (Cambridge Univ. Press 1988).

9. *Id.* at 15 (noting that five countries are the founding members of OPEC: Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela).

10. JAHANGIR AMUZEGAR, *MANAGING THE OIL WEALTH: OPEC'S WINDFALLS AND PITFALLS* 27 (I.B. Tauris Publishers 1999).

11. SKEET, *supra* note 8, at 15.

12. *Id.*

13. SKEET, *supra* note 8, at 15.

14. *Id.*

15. SKEET, *supra* note 8, at 16.

16. *Id.*

17. SKEET, *supra* note 8, at 16.

18. *Id.*

19. It is interesting to note is that "Esso" comes from the letters "S" and "O" from Standard Oil.

Arabian light crude by fourteen cents per barrel.<sup>20</sup> The price of Arab Light Crude fell from a now incredulous \$1.90 to \$1.76.<sup>21</sup> The members seized their chance to transform the Commission into a more substantial organization.<sup>22</sup> Juan Pablo Perez Alfonzo, the Venezuelan Minister of Mines and Hydrocarbons, and Sheikh Abdullah Tariki, the Saudi Oil Minister, led a series of meetings in Caracas, Cairo, and Baghdad.<sup>23</sup> On September 14, 1960, the Organization of Petroleum Exporting Countries was born.<sup>24</sup>

OPEC's resolutions forcefully dictated the new demands of its members.<sup>25</sup> No longer would they tolerate the "highhandedness of the major international oil companies . . . ."<sup>26</sup> For decades, the oil majors controlled all decisions concerning the amount of oil extracted and both the sale price and quantity.<sup>27</sup> Now OPEC declared that its members could "no longer remain indifferent to the attitude heretofore adopted by the Oil Companies in effecting price modifications . . . ."<sup>28</sup>

OPEC's arrival was not heralded by the press or global community; in fact it was understated. The London *Times* declared "that 'the sole tangible result' . . . 'was the formation of an organisation' [sic] . . ." and went on to say one week later that "'basically the oil companies are regarded as natural allies . . . of the producing countries.'"<sup>29</sup> Even in Baghdad the headlines announcing OPEC's formation shared the front page with the Rome Olympic Games.<sup>30</sup> Only a few publications, such as Venezuela's *Panorama* magazine, recognized the importance of OPEC: "'[W]hat the producing countries seek in this agreement is the preservation of their future.'"<sup>31</sup>

A new gas organization is quietly forming and its low-key and inconspicuous growth is reminiscent of OPEC's creation.<sup>32</sup> Created in 2001, the

20. SKEET, *supra* note 8, at 1.

21. *Id.* at 17.

22. SKEET, *supra* note 8, at 18.

23. *Id.* at 17–18.

24. OPEC, WHAT IS OPEC? 1 (2005) [hereinafter WHAT IS OPEC], available at <http://www.opec.org/library/what%20is%20OPEC/whatisOPEC.pdf>.

25. SKEET, *supra* note 8, at 21. OPEC resolutions included:

That Members shall demand that Oil Companies maintain their prices steady and free from all unnecessary fluctuations; that Members shall endeavour, by all means available to them, to restore present prices to the levels prevailing before the reductions; that they shall ensure that if any new circumstances arise which in the estimation of the Oil Companies necessitate price modifications, the said Companies shall enter into consultation with the Member or Members affected in order fully to explain the circumstances; [and] [t]hat Members shall study and formulate a system to ensure the stabilization of prices by, among other means, the regulation of production, with due regard to the interests of the producing and of the consuming nations and to the necessity of securing a steady income to the producing countries, and efficient, economic and regular supply of this source of energy to consuming nations, and a fair return on their capital to those investing in the petroleum industry . . . .

*Id.*

26. AMUZEGAR, *supra* note 10, at 28.

27. *Id.*

28. SKEET, *supra* note 8, at 21.

29. *Id.* at 22.

30. SKEET, *supra* note 8, at 23.

31. *Id.*

32. Coy & Bush, *supra* note 7, at 36.

Gas Exporting Countries' Forum (GECF) is an "informally structured group of some of the world's leading gas producers aimed at representing and promoting their mutual interests."<sup>33</sup> The GECF membership has fluctuated since its formation in 2001, but it currently consists of: Algeria, Bolivia, Brunei, Egypt, Equatorial Guinea (as an observer), Indonesia, Iran, Libya, Malaysia, Nigeria, Norway (as an observer), Oman, Qatar, Russia, Trinidad & Tobago, the United Arab Emirates, and Venezuela.<sup>34</sup> Collectively, the GECF controls 73% of the world's gas reserves and 41% of production.<sup>35</sup> Its collective strength leads gas importers to worry that "the GECF has the potential to evolve into a gas version of OPEC."<sup>36</sup>

In 2004, gas exporting countries met at the Fourth Annual Gas Exporting Countries Forum where they agreed "to set up an executive bureau to coordinate their interests."<sup>37</sup> In fact, each year since 2001, more than a dozen of the world's gas exporting countries have met to discuss mutual interests. Last year they created a fifteen-member group, replete with a rotating president, which meets occasionally for discussion.<sup>38</sup> In addition to discussing the forum's structure, the GECF agreed to study various proposals including Egypt's request to set up a mechanism for pricing gas independently from oil.<sup>39</sup>

The 2005 forum meeting was held in Trinidad and Tobago.<sup>40</sup> During the meeting, the Chairman of the Fifth Ministerial Meeting, the Honorable Eric A. Williams, Minister of Energy and Energy Industries for Trinidad and Tobago, "articulated his expectation that the GECF member countries would identify mechanisms that would deepen cooperation on natural gas trade and economic policy matters."<sup>41</sup> The members further developed the structure of the GECF by endorsing a general framework, establishing the Liaison Office, and agreeing to acquire a gas supply and demand model.<sup>42</sup> The general framework has three operational levels: (1) a Ministerial Meeting; (2) an Executive Bureau; and (3) an Experts meeting.<sup>43</sup> Meanwhile the Liaison Office facilitates affairs of the Forum and is located in Qatar.<sup>44</sup> Objectives of that Office include facilitating the exchange of information among members and maintaining and recording ongoing studies and models.<sup>45</sup> Algeria was selected to lead the development of

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33. ALEXANDER'S GAS & OIL CONNECTIONS, GAS EXPORTING COUNTRIES FORUM – AN OVERVIEW (2005), available at <http://www.gasandoil.com/goc/marketintelligence/datamonitor/bfen0080.htm> (detailing information on the GECF that is available for purchase).

34. *Id.*

35. ALEXANDER'S GAS & OIL CONNECTIONS, *supra* note 33.

36. *Id.*

37. *Qatar Annual Review 2004: Exporters of Gas Form Bureau to Coordinate Members Interest*, OGNONLINE, May 24–30, 2004, <http://www.oilandgasnewsworldwide.com/bkarticlesf.asp?issueID=314&section=1716&article=13451> [hereinafter *Qatar Review*].

38. *Id.*

39. *Qatar Review*, *supra* note 37; *Gas Exporting Countries to Set Up Executive Bureau*, 9 ALEXANDER'S GAS & OIL CONNECTIONS, Apr. 7, 2004, <http://www.gasandoil.com/goc/features/fex41448.htm>.

40. Coy & Bush, *supra* note 7, at 36.

41. TRINIDAD & TOBAGO, MINISTRY OF ENERGY AND ENERGY INDUSTRIES, THE GAS EXPORTING COUNTRIES' FORUM 5TH MINISTERIAL MEETING (2005) [hereinafter MINISTRY OF ENERGY AND ENERGY INDUSTRIES], available at <http://energy.gov.tt>.

42. *Id.*

43. MINISTRY OF ENERGY AND ENERGY INDUSTRIES, *supra* note 41.

44. *Id.*

45. MINISTRY OF ENERGY AND ENERGY INDUSTRIES, *supra* note 41.

the gas supply and demand model, which will be housed in the Liaison Office when completed.<sup>46</sup> The Sixth Ministerial Meeting in 2006 will be hosted by Venezuela.<sup>47</sup> But as this future natural gas OPEC's formation proceeds, it faces a number of significant challenges.

### III. HIGH DEMAND: THE RISE OF NATURAL GAS

#### *"The Next Prize"*<sup>48</sup>

The global economy is becoming heavily dependent on natural gas.<sup>49</sup> The arising OGEC relies on this premise since a monopoly requires not only a controlled supply, but a steady or increasing demand.<sup>50</sup> Although gas was once thought of as merely a byproduct of crude oil and flared off of producing oil wells, natural gas usage is rising and so is demand.<sup>51</sup> By 2025, the United States is expected to require thirty-one trillion cubic feet (Tcf) per year.<sup>52</sup> By then, North American domestic supplies will amount to only twenty-four Tcf per year.<sup>53</sup>

The United States' current shortage is offset by gas imports from Canada, which is pipeline accessible. But, wells in the Gulf of Mexico are in decline and Canada's production may fall off by 2015.<sup>54</sup> By that time, gas fields in the Rocky Mountain states and Alaska will not meet future demand.<sup>55</sup> The large gap between future supply and demand will be made up from overseas imports.<sup>56</sup> Forecasts for Europe and particularly Asia are just as striking.<sup>57</sup> In Europe, gas provides over 20% of total energy consumption, with most gas transported by pipeline from Russia, which has over 30% of the world's gas reserves.<sup>58</sup>

The increase in global demand is driven in part by electrical power generation.<sup>59</sup> In the United States alone, more than 200,000 megawatts (MW) of new generating capacity is currently being constructed or is scheduled to become operational in the near future.<sup>60</sup> This awesome figure is equivalent to one quarter of the entire capacity of the United States in 2000.<sup>61</sup> Natural gas is now the primary choice for power generation and over half of the world's operating

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46. *Id.*

47. MINISTRY OF ENERGY AND ENERGY INDUSTRIES, *supra* note 41.

48. Daniel Yergin & Michael Stoppard, *The Next Prize*, 82 FOREIGN AFFAIRS 103 (2003).

49. *See id.*

50. Coy & Bush, *supra* note 7, at 36 (referring to Amy M. Jaffe & Ronald Soligo's 2004 study on gas geopolitics).

51. FLETCHER J. STURM, TRADING NATURAL GAS 1 (PennWell Publ'g Co. 1997).

52. H. Josef Hebert, *The Dawn of a New Age/Liquefied Natural Gas Quickly Joining Oil as Major U.S. Energy Import*, THE PRESS OF ATLANTIC CITY, Feb. 27, 2005, at B1.

53. *Id.*

54. Hebert, *supra* note 52.

55. *Id.*

56. *See* Coy & Bush, *supra* note 7, at 36.

57. *See* Hector Igbikiowubo, *2020 Scenario: OPEC May Be Replaced*, ENERGY BULLETIN, Jan. 12, 2004, available at <http://www.energybulletin.net/145.html>.

58. *Id.*

59. Igbikiowubo, *supra* note 57.

60. *Id.*

61. Igbikiowubo, *supra* note 57.

power stations are gas-fired.<sup>62</sup> In addition to large, international power projects, the construction of industrial plants will require large volumes of natural gas as their feedstock (e.g., ammonia/chemical fertilizer) or fuel for manufacturing processes.

The formation of an organization of gas exporting countries is timely. The worldwide demand for natural gas is at its highest level ever, due in part to enormous consumption by the United States and the Asian countries of China and India. According to the Energy Information Administration's (EIA) data, the United States produced 17,105 billion cubic feet (Bcf) of gas and consumed 19,862 Bcf in 2004.<sup>63</sup> Of the consumed gas, approximately 33% was for industrial use and about 25% was for electrical power generation.<sup>64</sup> To make up the difference between produced gas and consumed gas, the United States imports natural gas and may fairly be called a net importer.<sup>65</sup> Most of America's imported gas comes from Canada with the remainder originating in the international market and transported as liquefied natural gas (LNG).<sup>66</sup> The bulk of LNG imports come from Trinidad and Tobago, Algeria, Malaysia, Qatar, Oman, and Nigeria.<sup>67</sup> It is notable that Algeria, Qatar, and Nigeria are also current OPEC members.<sup>68</sup>

The United States' demand for natural gas was particularly underscored by two disastrous and deadly hurricanes in 2005. During their course, Hurricanes Katrina and Rita resulted in the loss of 88% and 69% respectively of Gulf of Mexico natural gas production.<sup>69</sup> Those figures are equivalent to 16% and 13% of U.S. daily production.<sup>70</sup> Even by January 2006, nearly six months after the impact of Hurricane Katrina, almost 19.5% of normal daily federal Gulf of Mexico natural gas production remained shut-in.<sup>71</sup> In addition to shut-in production, a number of natural gas processing facilities on the Gulf Coast were damaged.<sup>72</sup> The loss of those facilities continues to delay the recovery of natural gas production in the Gulf.<sup>73</sup>

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62. *Id.*

63. ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, NATURAL GAS MONTHLY 3, 6 (Jan. 2005), [hereinafter NATURAL GAS MONTHLY], available at [http://www.eia.doe.gov/pub/oil\\_gas/natural\\_gas/data\\_publications/natural\\_gas\\_monthly/historical/2005/2005\\_01/pdf/ngm\\_all.pdf](http://www.eia.doe.gov/pub/oil_gas/natural_gas/data_publications/natural_gas_monthly/historical/2005/2005_01/pdf/ngm_all.pdf).

64. *Id.* at 6 (showing that 1,009 Bcf is for lease and plant fuel, 590 is for pipeline and distribution use, 4,155 is for residential, 2,610 is commercial, 6,617 is industrial, 4,863 is for electric power, and 19 is for vehicle fuel).

65. NATURAL GAS MONTHLY, *supra* note 63, at 10 (noting that based on three years of data, the US may be called a net importer. In 2004, the net imports were 3,762,426 MMscf and the net exports were 3,077,294 MMscf).

66. *Id.* (porting that Canada provided 3,176,957 MMcf).

67. NATURAL GAS MONTHLY, *supra* note 63, at 10 (stating LNG totals come from (MMcf): Trinidad/Tobago (421,297), Algeria (100,730), Malaysia (19,999), Qatar (11,854), Oman (9,412), Nigeria (8,831)).

68. WHAT IS OPEC, *supra* note 24.

69. AM. PETROLEUM INST., STATUS REPORT (2005), available at [http://api-ec.api.org/filelibrary/RC%20Letter%20to%20Congress\\_Rita%20and%20Katrina%20status.pdf](http://api-ec.api.org/filelibrary/RC%20Letter%20to%20Congress_Rita%20and%20Katrina%20status.pdf).

70. *Id.*

71. ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, SHORT-TERM ENERGY OUTLOOK 1 (Jan. 10, 2006), available at <http://www.eia.doe.gov/pub/forecasting/steo/oldsteos/jan06.pdf>.

72. ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, EIA REPORT ON HURRICANE IMPACTS ON U.S. ENERGY (Dec. 27, 2005), available at [http://tonto.eia.doe.gov/oog/special/eia1\\_katrina.html](http://tonto.eia.doe.gov/oog/special/eia1_katrina.html).

73. *Id.*

On the other side of the world, the two most populous nations face a dire energy crisis as their populations increase and require fuel for burgeoning industries and residents.<sup>74</sup> In 2004, India's oil imports climbed by 11% and China's imports climbed by 33%.<sup>75</sup> The International Energy Administration (IEA) expects these countries "to use 11.3 million barrels [per] day by 2010, which will be more than one-fifth of global demand."<sup>76</sup> Population growth and industrial development are two factors contributing to this projected demand. Currently, 37% of the world's population lives in these two countries.<sup>77</sup> This population and the booming industrial and manufacturing development resulted in China's 2004 oil demand exceeding Japan's for the first time.<sup>78</sup> In fact, China is second to only the U.S. in energy consumption and India is close behind in fourth place after Russia.<sup>79</sup> This energy dependence results in both countries relying on the Middle East to fuel the differential.<sup>80</sup> Consequently, Chinese and Indian naval forces have expanded as they become increasingly dependent on Middle East tankers, "posing the beginnings of an eventual challenge to American influence in the Indian Ocean and South China Sea."<sup>81</sup>

Historically, China and India have not relied on natural gas as a major fuel.<sup>82</sup> But given both countries' need to secure stable energy supplies, China and India have embarked on major expansions of their gas infrastructure.<sup>83</sup> Although natural gas currently accounts for only 3% of China's total energy consumption, it is predicted to double by 2010.<sup>84</sup> This doubling is expected to involve natural gas imports by both pipeline and LNG, as well as domestic production from China's 53.3 Tcf of reserves.<sup>85</sup> In India, natural gas currently accounts for 6.5% of India's total primary energy consumption.<sup>86</sup> "India's total gas demand is projected to grow at an average rate of 5.1%/year to 7.7 [Bcf per day] in 2025 from 2.5 [Bcf per day] in 2002."<sup>87</sup> Similar to China, India intends to increase its natural gas supply by developing domestic production and increasing imports through pipelines and LNG.<sup>88</sup> The development of India's proved reserves, estimated at 24.7 Tcf in 1999,<sup>89</sup> includes optimizing and

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74. Keith Bradsher, *2 Big Appetites Take Seats at the Oil Table*, N.Y. TIMES, Feb. 18, 2005, at C1.

75. *Id.*

76. Bradsher, *supra* note 74.

77. *Id.*

78. Bradsher, *supra* note 74.

79. *Id.*

80. Bradsher, *supra* note 74.

81. *Id.*

82. ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, COUNTRY ANALYSIS BRIEFS: CHINA 6, 7 (2005) [hereinafter COUNTRY ANALYSIS BRIEFS], available at <http://www.eia.doe.gov/emeu/cabs/china.html> (stating that coal makes up 65% of China's primary energy consumption); INT'L ENERGY ADMIN., INDIA – A GROWING INTERNATIONAL OIL AND GAS PLAYER 2, 10 (2000) [hereinafter INDIA], available at <http://www.iea.org/textbase/papers/2000/oilgas.pdf> (stating that coal and oil products represent a little more than half of India's primary energy supply).

83. *Id.*

84. COUNTRY ANALYSIS BRIEFS, *supra* note 82, at 6.

85. *Id.*

86. Shree Vikas & Christopher L. Ellsworth, *Natural gas, LNG to Play Support Role in Meeting India's Increasing Energy Needs*, OIL & GAS J., Jan. 23 2006, at 19.

87. *Id.*

88. INDIA, *supra* note 82, at 11.

89. *Id.* at 10 (noting that in 1999, proven gas reserves in India were evaluated at 700 billion cubic

utilizing previously flared gas in the prolific Mumbai (formerly Bombay) High basin.<sup>90</sup>

Nearby countries are also looking to enter the valuable Chinese and Indian natural gas markets. Australia recently finalized a landmark LNG contract with China's Guangdong province.<sup>91</sup> The \$25 billion contract was Australia's single largest export deal and China's first LNG supply contract.<sup>92</sup> Many countries vied for the opportunity to be China's first LNG supplier, including Indonesia, Malaysia, Qatar, Russia, and Yemen.<sup>93</sup> China's opening of its natural gas industry to foreign investment was induced by the need to increase the amount of cooperative projects with foreign investors.<sup>94</sup> India entered into a twenty-five year agreement with Iran to import 7.5 million tonnes of LNG per year.<sup>95</sup> The deal between the two countries is valued at \$35 to \$40 billion.<sup>96</sup> Additionally, India and Saudi Arabia recently agreed to "forge a strategic energy partnership based on complementarity and interdependence."<sup>97</sup> The partnership will promote joint ventures in both the private and public sectors in the upstream and downstream oil and natural gas industries.<sup>98</sup>

China and India are also looking to each other for energy expansion.<sup>99</sup> They themselves held a first round of strategic energy discussions in Beijing to explore cooperation in the acquisition of overseas oil and gas assets.<sup>100</sup> The two countries are reportedly exploring options in Africa, Central Asia, Latin America, and Russia.<sup>101</sup> Clearly, the effort to expand the realm of Sino-Indo energy imports is constantly increasing.

To further meet the challenge of energy growth, the Indian and Chinese governments are "looking to tap countries the Bush administration and the European Union have tried to isolate."<sup>102</sup> In doing so, "countries 'are using their state oil companies to ally with each other' . . . ."<sup>103</sup> Recently, Indian officials saluted Omer Mohamed Kheir, the Secretary General of the Ministry of Energy and Mining in Sudan. India, China, and Sudan have developed close ties as the Indian-controlled Oil and Natural Gas Corporation and Chinese state-owned

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meters; author converted to Bcf using conversion factor of 35.315 cubic feet per cubic meter).

90. INDIA, *supra* note 82, at 11.

91. Nigel Wilson, *Australia-China LNG Deal Sealed*, ENERGY BULLETIN, Dec. 14, 2004, available at <http://www.energybulletin.net/3855.html>.

92. *Id.*

93. Wilson, *supra* note 91.

94. *China to Fully Open Natural Gas Industry*, XINHUA NEWS AGENCY, Dec. 1, 2005, available at <http://www.china.org.cn> (stating Shell and Unocal retreated from the East Sea natural gas project and Shell, ExxonMobil, and Gazprom also gave up on a west-to-east transmission project).

95. ENS Economic Bureau, *Oil Diplomacy Pays Off, India Signs Mega LNG Import Deal with Iran*, THE INDIAN EXPRESS, Jan. 8, 2005, available at [http://www.indianexpress.com/full\\_story.php?content\\_id=62321](http://www.indianexpress.com/full_story.php?content_id=62321).

96. *Id.*

97. Himendra Kumar, *India, Saudi Arabia in Energy Deal*, DOW JONES NEWSWIRE, Jan. 27, 2006, available at [http://money.cnn.com/2006/01/27/news/international/india\\_saudi.dj/index.htm](http://money.cnn.com/2006/01/27/news/international/india_saudi.dj/index.htm).

98. *Id.*

99. Pam Boschee, *Asia-Pacific Offshore Oil Production to Nearly Double by 2009*, OFFSHORE, Nov. 2005, at 32.

100. *Id.*

101. Boschee, *supra* note 99.

102. Bradsher, *supra* note 74.

103. *Id.* (emphasizing that the remark was made by William Gammell, the head of Scotland's Cairn Energy, which is one of the largest foreign oil companies operating in India).



companies pursue oil production in Sudan.<sup>104</sup> An obstacle in China's pursuit of natural gas assets is its tenuous relationship with the United States and other democratic nations. In the long-run, India may do better than China in acquiring overseas assets because of its more sustainable development model.<sup>105</sup> After all, there are still major "geopolitical and economic frictions between China and some of its major trading partners."<sup>106</sup> These tensions were evident in America's opposition to China's \$18.5 billion takeover bid for California-based Unocal.<sup>107</sup>

Economists agree that the energy market must prepare for a world in which growing energy demand from rapidly developing countries like China and India, as well as continued demand growth in North America, create more competition for traditional energy sources.<sup>108</sup>

#### IV. OBSTACLES TO OGEC VIABILITY

*"I do not think that there is any other quality so essential to success of any kind as the quality of perseverance."*

– John D. Rockefeller

All monopolies face challenges during their operation. Although DeBeers' Rhodes realized that prosperity in the diamond market relied on the "dual ability to manipulate demand and coordinate it with supply," he wondered how to accomplish both tasks.<sup>109</sup> His solution was to regulate the entire diamond industry so that the quantity of diamonds sold on the European market followed precisely the number of wedding engagements in any given year.<sup>110</sup> Over 100 years later, DeBeers still operates in accordance with Rhodes's solution. Likewise, OGEC faces numerous problems in its operations, most importantly in transportation, independence, and declining natural gas reserves.

##### A. Transportation

Without a method of effective natural gas transportation, OGEC cannot manipulate world-wide capacity or price. Traditionally, natural gas was a local, national, or continental business because it was limited by pipeline routes.<sup>111</sup> An increase in the LNG infrastructure would allow producers to transport natural gas

104. Bradsher, *supra* note 74.

105. Chietigj Bajpae, *Will the Peacock Outdo the Panda?*, ASIA TIMES ONLINE, Jul. 13, 2005, at <http://www.atimes.com/atimes/china/gg13ad02.html>. Chietigj Bajpae is a researcher for the Hong-Kong-based Civic Exchange. *Id.*

106. Bajpae, *supra* note 105; see also Jiang Wei, *China Remains World's 3rd Largest Trader*, CHINA DAILY, Jan. 12, 2006, at 9, available at [http://www.chinadaily.com.cn/english/doc/2006-01/12/content\\_511523.htm](http://www.chinadaily.com.cn/english/doc/2006-01/12/content_511523.htm) (stating that China's largest trading partners are the European Union, the United States, and Japan).

107. James Surowiecki, *All the Oil in China?*, THE NEW YORKER, July 4, 2005, available at [http://www.newyorker.com/printables/talk/050711ta\\_talk\\_surowiecki](http://www.newyorker.com/printables/talk/050711ta_talk_surowiecki).

108. Nick Snow, *Surging Asian Demand Dominates World Energy Outlook*, OIL & GAS J., Feb. 14, 2005, at 26.

109. SPAR, *supra* note 1, at 48–49.

110. *Id.*

111. COUNCIL ON FOREIGN RELATIONS, NEW IN FOREIGN AFFAIRS: KEEPING THE LIGHTS ON – DANIEL YERGIN ON A NEW GLOBAL ENERGY BUSINESS EMERGING IN LIQUEFIED NATURAL GAS (2003), [hereinafter KEEPING THE LIGHTS ON], available at [http://www.cfr.org/publication/6437/new\\_in\\_foreign\\_affairs.html](http://www.cfr.org/publication/6437/new_in_foreign_affairs.html).

either by pipeline, in gaseous form, or by refrigerated tanker as LNG.<sup>112</sup> The two main constraints in choosing a transportation methodology are price and accessibility.<sup>113</sup> Although there are vast networks of regional pipeline systems, geographical terrain and oceans limit the existence of transcontinental pipelines.

### 1. Physical LNG Requirements

Part of OPEC's success lies in the ease of transporting oil where there are no pipelines. Crude oil can be transported inexpensively because of its chemical composition—in its natural state it is a liquid. Using pumps, oil flows from the cargo hold of transportation tankers to terminals where it eventually remains in holding tanks or enters pipelines. Conversely, LNG requires liquefaction to turn gas into a -260°F liquid.<sup>114</sup> This liquid requires specialized refrigerated tankers that transport it to regasification terminals.<sup>115</sup> The terminals warm the LNG until it converts to gas and then feed it into pipelines for distribution.<sup>116</sup> LNG has enormous potential to meet the growing demand because a vast amount of natural gas is transportable as a single cargo.<sup>117</sup> "Methane, for instance, is 600 times less voluminous as a liquid than as a gas, so one shipment by an ultra-large tanker is the equivalent of 5[%] of the gas consumed in the U.S. on an average day."<sup>118</sup> Additionally, LNG and other gas-to-liquid fuels transported by sea allow producers to bypass the pipeline constraints that have traditionally limited natural gas to regional markets.<sup>119</sup> Until technology allows the construction of transoceanic pipelines, natural gas transportation will be done using LNG.

To be successful, OPEC must overcome these transportation restrictions: expense and limited location of liquefaction and regasification terminals. Not only is there a great cost in the liquefaction process and transportation, but LNG regasification terminals cost hundreds of millions of dollars to build and are, therefore, uncommon. In addition to structural costs, there is also an ongoing expense associated with impurity cleansing.<sup>120</sup> Although North American natural gas processing meets fairly rigid requirements for energy content, percentage of hydrocarbon liquids, and impurity content, imported LNG comes in a variety of qualities. For example, Nigerian LNG may have a different chemical composition and energy quality than LNG from Trinidad.<sup>121</sup> Differences in heat content present specific challenges to LNG receiving terminals.<sup>122</sup> "Hot" LNG requires processing to remove the natural gas liquids (NGLs) such as ethane, propane, and butane, and then dilution with lower energy

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112. BIJAN MOSSAVAR-RAHMANI & SHARMIN MOSSAVAR-RAHMANI, *THE OPEC NATURAL GAS DILEMMA* 30 (Westview Press, Inc. 1986).

113. *See id.* at 30-31.

114. Igbikiowubo, *supra* note 57.

115. *Id.*

116. Igbikiowubo, *supra* note 57.

117. *Id.*

118. Igbikiowubo, *supra* note 57.

119. *Id.*

120. Barbara Shook, *LNG: A New Source for NGLs or US Processing Problem to Come*, *NATURAL GAS WEEK*, Feb. 7, 2005, at 4-5.

121. *Id.*

122. Shook, *supra* note 120.

gas or nitrogen to meet existing pipeline standards.<sup>123</sup> In the United States, only the Southern Union terminal at Lake Charles, Louisiana can currently remove NGLs from LNG.<sup>124</sup> This influx of NGLs poses a problem because these products have a limited source of demand outlets, such as petrochemical plants.<sup>125</sup>

To protect its monopoly, OPEC must ensure that there is an expansive system of LNG tankers and terminals. Luckily for OPEC, it may not have to do anything by itself to promote expansion of the global LNG system. Countries that rely on LNG to meet their demands, as well as those that project extreme energy growth, have an incentive to build LNG receipt terminals. For example, current LNG imports account for less than 3% of the 61 Bcf of natural gas used daily in the U.S., but that share could grow tenfold in the next twenty years.<sup>126</sup> If the U.S. does not have the capacity to import the amount of needed gas, the clear implication is higher prices.<sup>127</sup> This similar worry among other nations has led to the increase in LNG projects around the world.<sup>128</sup>

Another reason that countries may want to increase their LNG infrastructure is for supply diversification. The EIA stated that “[w]hile politicians talk of the need for greater U.S. energy independence, American consumers are expected to be relying increasingly on LNG imports from Algeria, Qatar, Russia, and elsewhere.”<sup>129</sup> This LNG growth is similar to the growth experienced after the 1973 oil crisis. LNG got a major boost, particularly from Japan, which wanted to drastically reduce its dependence on Middle East oil.<sup>130</sup>

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123. *Id.*

124. Shook, *supra* note 120.

125. *Id.*

126. Hebert, *supra* note 52, at 16 (writing for the Associated Press).

127. *Id.* (quoting Guy Caruso, Administrator of the EIA).

128. See Hebert, *supra* note 52 (discussing Dominion Resources Inc.’s LNG import terminal in Chesapeake Bay) Two years ago, its offshore docking platform, able to handle two LNG tankers at a time, sat idle. Now, that platform unloads a tanker full of imported LNG on average every four days. A larger tank is near completion and two more tanks are planned. By 2008, the terminal will be able to handle 1.8 Bcf of imported gas daily, enough fuel to serve 6.1 million homes. *Id.* See also Igbikiowubo, *supra* note 57 (stating that Spain has four terminals in operation with two more planned) Spain has the highest number of any European country. In the U.S., applications to construct thirty more terminals have been made. ExxonMobil announced plans to build a \$600 million plant on the Texas coast to take in Qatari LNG and wants to build three more around the U.S. Shell and BP are among other companies driving to build new terminals in California, Texas, Alabama, Florida, Mexico, Nova Scotia, and other locations. *Id.*

129. Hebert, *supra* note 52.

130. Igbikiowubo, *supra* note 57.

## 2. Financial LNG Requirements<sup>131</sup>

To become a competitive and widely-used fuel, LNG requires an actively traded market. Formerly composed of mostly long-term contracts with rigid terms, the LNG market is becoming more flexible.<sup>132</sup> Short-term contracts and spot purchases now compete with the traditional (and still dominant) long-term contract.<sup>133</sup> This shift is in part due to the decreasing costs of LNG, the preference of buyers and sellers for flexibility, and the monetization of LNG reserves.<sup>134</sup>

According to the Gas Technology Institute, LNG costs have decreased by about 30% over the past ten years. LNG projects are capital intensive because they typically require third party financing and because traditional customers continue to value long-term contracts for security of supply.<sup>135</sup> Growth in LNG short-term contracts and spot markets will increase as the development costs of LNG, which include liquefying, transporting, and regasifying, continue to fall.<sup>136</sup> “[L]iquefaction costs have decreased 35[%] to 50[%] over the past ten years,

131. There are two major producing regions of LNG—the Pacific and Atlantic Basins. The Pacific Basin is the largest LNG-producing region in the world. It supplied almost half (49%) of all global exports in 2002. The Atlantic Basin supplied about 29% of the total world LNG production as of 2002. LNG pricing is situated around these two basins. ENERGY INFO. ADMIN., DEP’T OF ENERGY, THE GLOBAL LIQUEFIED NATURAL GAS MARKET: STATUS & OUTLOOK, LNG EXPORTERS (2003), available at <http://www.eia.doe.gov/oiaf/analysispaper/global/exporters.html>. Prices are typically expressed in U.S. dollars per million British thermal units (MMBtu). Historically, LNG prices are higher in the Pacific than in the Atlantic Basin, averaging about \$4 per MMBtu in the former and \$3 per MMBtu in the latter over the past ten years. This price differential could change if LNG import terminals are built on the North American west coast. Then Pacific Basin suppliers would gain greater access to the American market, benchmarked to various competing fuels, LNG prices trade according to their geographic location. In general there are three distinct and relatively independent LNG markets for LNG; each market having its own pricing structure, replete with its own price risk. United States LNG prices are benchmarked to pipeline natural gas. ENERGY INFO. ADMIN., DEP’T OF ENERGY, THE GLOBAL LIQUEFIED NATURAL GAS MARKET: STATUS & OUTLOOK, WORLD LNG MARKET STRUCTURE (2003) [hereinafter WORLD LNG MARKET STRUCTURE], available at <http://www.eia.doe.gov/oiaf/analysispaper/global/lngmarket.html>. “[T]he benchmark price is either a specified market in long-term contracts or the Henry Hub price for short-term sales.” *Id.* This benchmark exposes LNG importers and exporters to significant price risk “given the high degree of price volatility in U.S. natural gas markets.” WORLD LNG MARKET STRUCTURE, *supra*. European LNG prices are benchmarked to competing fuels such as low-sulfur residual fuel oil. Finally, Asian LNG prices are linked to imported crude oil. “The pricing formula typically includes a base price indexed to crude oil prices, a constant, and perhaps a mechanism for the review [or] adjustment of the formula.” *Id.* LNG hubs similar to Henry Hub and AECO are emerging in the United States, Belgium, and the United Kingdom, which presents opportunity for price arbitrage and eventual convergence of the price. WORLD LNG MARKET STRUCTURE, *supra*.

132. OSADEBE UZOMA CHIDINMA, UNIV. OF DUNDEE, WHAT EFFECT DOES THE EMERGING SPOT MARKET FOR LNG HAVE ON THE FINANCING OF GAS PROJECTS? (2004), available at [http://www.dundee.ac.uk/cepmpl/car/html/car8\\_article1.pdf](http://www.dundee.ac.uk/cepmpl/car/html/car8_article1.pdf).

133. *Id.* Short-term LNG contracts are principally contracts with a duration of one or two years. George H. B. Verberg, *Towards a Global Energy Market*, LNG REVIEW, 2005, available at [http://www.touchoilandgas.com/articles.cfm?article\\_id=472&level=2](http://www.touchoilandgas.com/articles.cfm?article_id=472&level=2) (explaining that the spot market is a market where participants buy and sell commodities or financial instruments for immediate delivery).

134. CHIDINMA, *supra* note 132 (noting monetization of LNG reserves refers to placing a monetary value on physical reserves).

135. See Linda Cook, *LNG and the Global Gas Market*, ENGINEER LIVE, Jan. 23, 2006, available at <http://www.engineerlive.com/in-our-opinion/14574/lng-and-the-global-gas-market.thtml>. Ms. Cook is the Executive Director of Gas & Power at Shell. *Id.*

136. ENERGY INFO. ADMIN., DEP’T OF ENERGY, THE GLOBAL LIQUEFIED NATURAL GAS MARKET: STATUS & OUTLOOK, LNG INDUSTRY COSTS DECLINING (2003) [hereinafter LNG INDUSTRY COSTS DECLINING], available at <http://www.eia.doe.gov/oiaf/analysispaper/global/lngindustry.html>.

[and] plant capital costs [have decreased] from more than US\$500 per ton of annual liquefaction capacity to less than US\$200 [per ton] for trains at existing plants . . . .”<sup>137</sup> Likewise, “LNG tanker[ construction costs] have decreased from about US\$280 million . . . in the mid-1980s to [just] US\$155 million in . . . 2003.”<sup>138</sup> Regasification terminal costs have also fallen although these costs are more site-specific and can range from \$100 million to more than two billion dollars.<sup>139</sup> Future advances in technology should lead to further decreases in LNG costs. An example is Statoil’s concept of an offshore LNG facility that incorporates a fully functioning LNG plant that is adapted to be accommodated onboard a barge.<sup>140</sup> Such a design would eliminate many of the costs associated with onshore plants and the mobile nature of the barge would allow a free-flowing commodity exchange.

LNG markets will evolve as buyers and sellers demand more flexibility from physical and financial contracts.<sup>141</sup> Traditional LNG contracts focused on long-term security of supply for the buyer with rigid terms frequently spanning twenty to twenty-five years.<sup>142</sup> The addition of “[t]ake-or-pay clauses shifted the volume risk to the buyer.”<sup>143</sup> Many of the newer long-term contracts are calculated to provide a base supply of LNG that is supplemented by short-term contracts during demand peaks.<sup>144</sup> As a result, “[s]hort-term trading has grown from 1[%] of the LNG market in 1992 to 8[%] (400 Bcf . . . ) in 2002.”<sup>145</sup> The number of such contracts “will continue to grow, especially in the Atlantic Basin, and could reach 15[%] to 20[%] of the LNG market over the next decade.”<sup>146</sup>

Moreover, as LNG accounts for a larger portion of energy company portfolios, liquid and transparent markets will be needed to monetize LNG reserves.<sup>147</sup> Once LNG becomes a common source of fuel to run plants and factories, industrial end-users will seek to hedge their LNG prices through the purchase of financial instruments, such as options and swaps.<sup>148</sup>

### 3. Safety LNG Requirements

Safety concerns could negatively impact the expansion of LNG infrastructure and lead to communities opposing the projects.<sup>149</sup> Although LNG cannot explode and is not flammable as a liquid, the Sandia National Laboratory

137. *Id.* The EIA notes that “LNG projects are among the most expensive energy projects. Accurate data on LNG plant costs are difficult to pinpoint since costs vary widely depending on location and whether a project is a greenfield, i.e., built in a new location, or an expansion of an existing plant.” LNG INDUSTRY COSTS DECLINING, *supra* note 136.

138. *Id.* (according to the Gas Technology Institute; all costs are in nominal U.S. dollars).

139. LNG INDUSTRY COSTS DECLINING, *supra* note 136.

140. STATOIL, DESIGN CONCEPT: OFFSHORE LNG PLANT, available at <http://www.statoil.com/statoilcom/technology/SVG03268.nsf?opendatabase&lang=en> (last visited Mar. 5, 2006).

141. See Cook, *supra* note 135.

142. WORLD LNG MARKET STRUCTURE, *supra* note 131.

143. *Id.*

144. LNG INDUSTRY COSTS DECLINING, *supra* note 136.

145. *Id.*

146. LNG INDUSTRY COSTS DECLINING, *supra* note 136.

147. *Id.*

148. WORLD LNG MARKET STRUCTURE, *supra* note 131.

149. Hebert, *supra* note 52 (writing for the Associated Press).

concluded that an explosion causing a large enough hole in a double-hulled LNG vessel "would release millions of gallons of fuel that would quickly turn to gas and [then] ignite."<sup>150</sup> "The fire would be so intense that it could cause major injur[ies] and burn buildings one-third of a mile away[.]"<sup>151</sup> and "could give second-degree burns to people one mile away."<sup>152</sup> Growing demand for LNG should lead to improvements in technology that increase safety features and decrease costs.<sup>153</sup>

#### 4. LNG Conclusions

In terms of OGEC's membership, major players in future LNG trading will be those that commit to building expensive facilities, not just nations with the largest gas reservoirs. Although Norway only has 1.4% of the world's natural gas reserves, it could become a significant LNG exporter as it continues to construct plants.<sup>154</sup> Likewise, in addition to its OPEC membership, Indonesia is primed to be a major LNG player. It is already the world's biggest LNG exporter, "supplying some 30 million tons [per] year to major buyers that include Japan and South Korea."<sup>155</sup> David Victor, Director of the Energy and Sustainable Development Program at Stanford University, predicts that huge gas reserves will not guarantee success in LNG, rather the lead countries in a global LNG market will be "those that create the best climate for outside private investment to attract the technology needed for LNG processing."<sup>156</sup>

The increase in popularity of LNG, as well as the future need for natural gas, will result in LNG becoming a larger staple of world markets.<sup>157</sup> Thanks to individual nations' own needs for reliable energy sources and concerns of over-reliance, OGEC may conquer the transportation obstacle with relative ease.

#### B. Retention of Independence

The second obstacle that OGEC faces is to remain independent from OPEC, which may view an emerging OGEC as a threat to its monopoly. OPEC members already account for a majority of the natural gas reserves, so the point is almost moot in creating a separate gas cartel.<sup>158</sup> While Russia holds 30% of the world's proven natural gas reserves, nine OPEC countries hold 43%.<sup>159</sup>

The importance of natural gas to world economies has not escaped OPEC's notice. OPEC members are preparing for the eventual switch to natural gas and

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150. *Id.*

151. Hebert, *supra* note 52.

152. *Id.*

153. Hebert, *supra* note 52. For more information on safety advances and government standards, please refer to: DR. MICHELLE MICHOT FOSS, UNIV. OF TEX., LNG SAFETY AND SECURITY (2003), available at [http://www.beg.utexas.edu/energyecon/lng/documents/CEE\\_LNG\\_Safety\\_and\\_Security.pdf](http://www.beg.utexas.edu/energyecon/lng/documents/CEE_LNG_Safety_and_Security.pdf).

154. *OPEC-Like Cartel in Natural Gas is not Impossible*, 10 ALEXANDER'S GAS & OIL CONNECTIONS, Feb. 10, 2005, available at <http://www.gasandoil.com/goc/features/fex50698.htm>.

155. Igbiokwubo, *supra* note 57.

156. H. JOSEF HEBERT, CTR. FOR ENVTL. SCI. AND POLICY, BEST INVESTMENT CLIMATE, NOT CARTEL, WILL LEAD TO SUCCESS IN EXPANDING LNG PRODUCTION (2005) [hereinafter BEST INVESTMENT CLIMATE].

157. *Id.* LNG import terminals are growing in Louisiana, Georgia, and the Boston area. More than forty new LNG projects are proposed and about a dozen may be built. BEST INVESTMENT CLIMATE, *supra* note 156.

158. See BEST INVESTMENT CLIMATE, *supra* note 156.

159. *Id.* (stating that Iran holds 15% of natural gas reserves).

LNG. The United Arab Emirates has 212 Tcf of gas that is poised to take over from the Middle East's declining oil reserves.<sup>160</sup> Oman has also used LNG exports worth \$1.2 billion in 2002 to offset falling oil revenue.<sup>161</sup> Further, OPEC already realizes the power it wields and will probably try to dictate LNG prices and supplies under the OPEC structure.<sup>162</sup> George Sterzinger, Executive Director of the Renewable Energy Policy Project, has no doubts: "Just as with crude oil, the future control of gas is determined by who has the reserves. OPEC will have a dominance that is at least comparable to what they have in crude."<sup>163</sup>

Remaining independent may be OPEC's most difficult challenge. However, the alternative remains that OPEC arises under the blessings of OPEC with a view to merge the two entities if OPEC decreases in power due to dwindling crude oil reserves. This idea will be further developed in part V.

### C. Scarce Supply of Natural Gas

There is a consensus that natural gas reserves, like crude oil, are declining.<sup>164</sup> M. King Hubbert, an American geologist and geophysicist predicted that American oil production would peak around 1970.<sup>165</sup> Although his prediction was accurate, critics of Hubbert's theory argue that companies are replacing reserves using new technology that allows for enhanced exploration and development. However, the consensus is that companies are not replacing reserves as quickly as they are being produced.<sup>166</sup> While there are additional sources such as tight gas reservoirs, coal seam, gas hydrates, etc., ultimately natural gas and crude oil are non-renewable forms of energy.

The premise of the formation of an organization of gas exporting countries is that natural gas supplies remain abundant and outpace demand. Experts question this premise and warn that the construction of LNG terminals does not guarantee the supply side of the LNG equation.<sup>167</sup> Uwa Igiehon, Director of Energy and Utilities for RBC Capital Markets, predicts American and European incremental LNG demand of 8.2 Bcf per day, but probable incremental supply from the Atlantic Basin and Arabian Gulf of only 5.3 Bcf per day.<sup>168</sup> Accounting

160. Igbikiowubo, *supra* note 57.

161. *Id.*

162. BEST INVESTMENT CLIMATE, *supra* note 156.

163. *Id.*

164. See generally KEEPING THE LIGHTS ON, *supra* note 111.

165. Michael Duffy, *The Good Oil*, COUNTERPOINT, Feb. 14, 2005, available at <http://www.abc.net.au/rn/talks/counterpoint/stories/s1298084.htm>.

166. See generally Robert J. Samuelson, *The Dawn of a New Oil Era?*, NEWSWEEK, Apr. 4, 2005, at 37.

167. Jodi Wetuski, *U.S. LNG: More Questions than Answers*, PETROLEUM FIN. WEEKLY, Feb. 2, 2004, at 2 (citing Uwa Igiehon, director of energy and utilities for RBC Capital Markets).

168. *Id.* at 6.

Proved reserves are those quantities of petroleum which, by analysis of geological and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under current economic conditions, operating methods, and government regulations. Proved reserves can be categorized as development or undeveloped.

SOCIETY OF PETROLEUM ENGINEERS, GLOSSARY OF TERMS USED, available at [http://www.spe.org/spe/jsp/basic/0,,1104\\_3306579,00.html](http://www.spe.org/spe/jsp/basic/0,,1104_3306579,00.html) (last visited Mar. 5, 2006). "Probable reserves are those unproved reserves which analysis of geological and engineering data suggests are more likely than not to be recoverable." *Id.* "Possible reserves are those unproved reserves which analysis of geological and engineering data suggests are less likely to be recoverable than probable reserves." SOCIETY OF PETROLEUM ENGINEERS, GLOSSARY OF TERMS USED, available at <http://www.spe.org/spe/jsp/basic>

for possible supplies increases the later number to only 10.2 Bcf per day. Igiehon succinctly states that there is little margin for error.<sup>169</sup>

Even reserves in Russia, a natural gas goliath, are falling. In 1991 estimated reserves were 643 billion cubic meters (BCM),<sup>170</sup> but fell to 591 BCM by 1998.<sup>171</sup> This sizeable decline gives rise to speculation that "a substantial and irreversible production decline was imminent."<sup>172</sup> Increases in production would have to come from new development in areas such as Eastern Siberia and the Far East.<sup>173</sup>

Similar to current natural gas technology and infrastructure, LNG will also be subject to interruptions, even if short-lived.<sup>174</sup> These supply disruptions will only increase supply-demand disparity. Many international energy companies agree.<sup>175</sup> With only forty regasification plants in the world, spread among ten countries with about twenty in Japan and four in the US, one serious incident and an entire regional system could shut down with devastating effects.<sup>176</sup> Experts believe that the best response to LNG security concerns is to develop a global LNG business with a diversified supply.<sup>177</sup> Encouraging LNG projects in various countries safeguards against undue dependence in only a few nations.<sup>178</sup>

#### D. Fuel-Switching

The formation of OGECC presumes that natural gas will be the dominant global fuel. If gas demand exceeds supplies, the price of gas will increase. While some natural gas users will continue to pay increased prices, others with the ability to fuel-switch will stop using natural gas at a certain price. Typically, fuel-switching occurs when industrial end-users switch input fuels, using whichever fuel costs the least. After the 1973 oil crisis, there was an increase in the construction of dual capacity power plants and factories.<sup>179</sup> These plants and factories contain combustion equipment that allows easy switching from one input fuel, such as oil, gas, or coal, to another.<sup>180</sup> Fuel-switching gives industrial consumers the ability to choose the cheapest energy source at any given moment.<sup>181</sup> For example, if OGECC's formation results in artificially high prices, industrial end-users may switch to coal to avoid purchasing expensive natural gas.

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/0,,1104\_3306579,00.html (last visited Mar. 5, 2006).

169. Wetuski, *supra* note 167.

170. Conversion: 1 cubic meter = 6.28 barrels.

171. INT'L ENERGY AGENCY, RUSSIA ENERGY SURVEY 2002 111 (2002) [hereinafter RUSSIA ENERGY SURVEY], available at <http://www.iea.org/textbase/nppdf/free/2000/russia2002.pdf>.

172. *Id.*

173. RUSSIA ENERGY SURVEY, *supra* note 171.

174. Yergin & Stoppard, *supra* note 48.

175. Igbikiowubo, *supra* note 57 (interviewing Doug Rotenburg, BP's president for global LNG).

176. *Id.*

177. Igbikiowubo, *supra* note 57.

178. *Id.*

179. Daniel Yergin, *Energy Security in the 1990s*, 67 FOREIGN AFFAIRS 110 (1998).

180. *Id.*

181. Yergin, *supra* note 179.



## V. OGEC STRUCTURE

*"The meek shall inherit the earth, but not its mineral rights."*

**- J. Paul Getty**

If OGEC forms under the auspices of OPEC, it may well be incorporated into the OPEC structure and perhaps become dominant as the natural gas market grows in strength. Under this scenario, OGEC could simply become another Board under the current OPEC structure.<sup>182</sup> An OGEC that is a division of OPEC could form its own Conference, replete with its own Board of Governors. However, the OPEC Secretariat would oversee OGEC. Taking the current OPEC form may be the best choice, especially if the membership remains much the same.

Another structure that could be used is to set up regional OGECs aligned by geographical pipeline systems. Although a cost-effective and complete LNG network would increase the control of a global gas cartel, the reality is that LNG projects take years to complete. In the meanwhile, OGEC could establish itself by forming several regional blocks based purely on pipeline systems, similar to the rise of international trading blocks. Each regional group would consist of the member nations who control excess supply in their geographic block. The regional OGECs may be composed of:

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182. WHAT IS OPEC, *supra* note 24, at 1. The current OPEC configuration contains: (1) the Conference; (2) the Heads of Delegation; (3) the Board of Governors; (4) the Economic Commission Board; (5) the Ministerial Monitoring Sub-Committee; and (6) the OPEC Secretariat. The OPEC Conference is "the supreme authority of the Organization." *Id.* It consists of delegations, including the Delegation Head. Generally meeting twice a year, in March and September, the Conference operates on "the principle of unanimity – one Member, one vote." WHAT IS OPEC, *supra* note 24, at 1. The Conference is responsible for general policy formation and determining policy implementation methodology. In addition to various other duties, the Conference decides on OPEC membership, approves the Governors, and provides direction to the Board. The Heads of Delegation are the official representatives of each Member Country to the Conference. *Id.* Typically, they are their nation's energy ministers. The Board of Governors (BoG) is comparable to a board of directors within a Fortune 500 company. The BoG is composed of Member-nominated Governors who are confirmed for two year terms. WHAT IS OPEC, *supra* note 24, at 1. The BoG is responsible for OPEC's management, implements Conference resolutions, prepares the budget, and performs other reporting functions. The Economic Commission Board acts within the Secretariat's framework to assist OPEC in promoting stability in the international oil market. The Board is composed of Member Country representatives. Established in 1993, the Ministerial Monitoring Sub-Committee's mandate is to monitor oil production and exports by Member Countries. *Id.* The Sub-Committee is comprised of three Heads of Delegation and the Secretary General. The Secretariat is OPEC's main administrative arm functions as its headquarters. Its responsibility includes carrying out the executive functions, under the Board of Directors' direction. The Secretariat is composed of the Office of the Secretary General, the Research Division, and various other departments including the Research Divisions and Petroleum Market Analysis. WHAT IS OPEC, *supra* note 24, at 1.

Regional OGEC	Supply Control Member
North America <sup>183</sup>	Canada, Mexico <sup>184</sup>
South America	Venezuela, Bolivia, Columbia
Euro-Asia	Russia, Middle East
Africa	Algeria, Libya, Sudan

These several regional OGECs would then operate independently of each other, providing that no regional OGEC threatened another's interests. For this reason, it may be necessary to create a parent OGEC that would monitor the regional OGECs and could provide arbitration if internal disputes arose. The parent would also help facilitate the transition to international control once the LNG infrastructure allows transportation between continents.

#### IMPORTANCE OF RUSSIA MEMBERSHIP IN OGEC

OGEC's survival is conditional upon Russian membership. Without Russia the OGEC will not be able to solidify its market hold as the OPEC was able to do. The Trinidadian hosts of the 2005 Gas Exporting Countries Forum were aware of this necessity and invited Russia to attend.<sup>185</sup> According to the IEA 2004 Statistics, Russia is the leading producer and exporter of natural gas, exporting a little over 30% of its total production.<sup>186</sup> Gazprom, Russia's gas monopoly, controls 25% of the world's known gas reserves and supplies almost all natural gas for central Europe and the former Soviet Union nations.<sup>187</sup>

183. Any regional OGEC in North America would be subject to the North American Free Trade Act (NAFTA). Under NAFTA,

[e]xport restrictions are generally prohibited and exceptions relate to conservation, price stabilization and limited defined national security grounds. However any restriction must be applied to ensure that the burden equally applies to domestic and export Canada [and] U.S. markets. [In] Mexico, oil, gas, refining, basic petrochemicals, and the nuclear and electricity sectors are reserved for the Mexican State sector pursuant to the country's Constitutional restrictions.

Alejandro Posadas, *NAFTA at 10 years: What is its Value Added?*, <http://www.jhfc.duke.edu/canadianstudies/NAFTAFinal.pdf> (last visited Mar. 4, 2006). Such regional OGECs would also probably be curtailed by the passage of NAFTA Plus, which would in effect be a trinational merger that would result in an entity similar to the EU – called North America. Miguel Pickard, *Trinational Elites Map North American Future in "NAFTA Plus"*, ENERGY BULLETIN, Aug. 26, 2005, available at <http://www.energybulletin.net/8365.html>.

184. Antonio Pena, Presentation on Petroleum Exploration and Development in Mexico for Oil & Gas Contracts class at SMU Dedman School of Law (Apr. 6, 2005) (on file with author). Although Mexico does currently export crude oil to the United States, it does not have sufficient natural gas reserves to meet its own internal demand. Therefore, it would not be a supply control member in a North American regional OGEC. *Id.*

185. Coy & Bush, *supra* note 7, at 36.

186. INT'L ENERGY AGENCY, KEY WORLD ENERGY STATISTICS 2004 13 (2004), available at <http://www.iea.org/dbtw-wpd/Textbase/nppdf/free/2004/keyworld2004.pdf>.

187. See *Ivan at the Pipe*, ECONOMIST, Dec. 9, 2004 [hereinafter *Ivan at the Pipe*], available at

Russian geography adds to the importance of including the country in OGEC given its access to both Europe and Asia. Russia has also started investigating the possibility of building a direct pipeline to England, which would further establish its dominant ties to the European market and could possibly reduce European reliance on Algerian gas.<sup>188</sup> This pipeline would also reduce Russian's dependence on Ukraine and Belarus, the two most important transit countries that allow Russian gas to enter the coveted European markets.<sup>189</sup> More importantly, Russia is able to access Asian markets. China and India's ability to purchase non-OGEC gas from Russia will reduce global natural gas demand and OGEC power.

To those who still were not aware of Russia's dominance in natural gas, Russia recently proved its might. On January 1, 2006, President Vladimir Putin shut off gas exports to Ukraine.<sup>190</sup> The termination of exports during a particularly cold winter startled many countries, including Ukraine.<sup>191</sup> Although Russia resumed gas flow in a few days, many European countries, as far west as France, were affected. Not only does one quarter of Europe's gas come from Russia,<sup>192</sup> but Ukraine is a major pipeline outlet from Russia to western Europe.<sup>193</sup>

Russia maintained that the halt in gas flow was because of a pricing dispute. Ukraine had enjoyed flat rates of \$50 per 1000 cubic meters, while the market rate was several times higher.<sup>194</sup> In a compromise, Russia and Ukraine agreed to a complex deal that ended the dispute.<sup>195</sup> The agreement dictated that Russia sell its gas for \$230 per 1000 cubic meters (Mcm) to a trading company that mixes the gas with cheaper gas from Central Asia.<sup>196</sup> Ukraine then purchases gas for \$95 per Mcm from the same trading company.<sup>197</sup> Eventually Ukraine will have to pay market rates.<sup>198</sup> However, the brokered pricing is not fair and impartial when compared to other Gazprom customers. President Putin agreed to maintain Belarus gas prices steady at \$46 per 1000 cubic meters (Mcm) for 2006.<sup>199</sup>

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<http://www.economist.com/business>.

188. Judy Dempsey, *Gazprom's Dream Pipeline to Europe*, ENERGY BULLETIN, Mar. 17, 2005, at <http://www.energybulletin.net/4767.html>.

189. *Id.*

190. Peter Finn, *Russia Cuts Off Gas to Ukraine In Controversy Over Pricing*, WASHINGTON POST, Jan. 2, 2006, at A07.

191. Peter Finn, *Russia Reverses Itself on Gas Cuts*, WASHINGTON POST, Jan. 3, 2006, at A12.

192. Vladimir Isachenkov, *Gazprom Blames Ukraine for Gas Supply Drop*, WASH. POST, Jan. 24, 2006.

193. *Russia Cuts Natural Gas Supplies to Europe as Cold Snap Worsens*, BLOOMBERG.COM, Jan. 18, 2006, at <http://www.bloomberg.com/apps/news?pid=71000001&refer=europe&sid=apzQiTHtnB6k> (citing, indirectly, Ukrainian Energy Minister Ivan Plachkov). About 80% of Russian gas delivered to Europe travels across Ukraine. Alex Nicholson, *Reports: Gazprom Cuts European Supplies*, BUS. WK., Jan. 18, 2006, available at <http://www.businessweek.com/ap/financialnews/d8f755tg4.html>.

194. Peter Finn, *Russia and Ukraine Reach Deal on Gas, Ending Dispute*, WASH. POST, Jan. 5, 2006, at A12, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/01/04/ar2006010400462.html>.

195. *Id.*

196. Finn, *supra* note 194.

197. *Id.*

198. Finn, *supra* note 194.

199. *Democracy's High Price*, WASH. POST, Dec. 24, 2005, at A16 [hereinafter *Democracy's High Price*], available at [http://www.washingtonpost.com/wp-dyn/content/article/2005/12/23/ar2005122301402\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2005/12/23/ar2005122301402_pf.html).

Belarus is led by pro-Moscow President Alexander Lukashenko.<sup>200</sup>

Ukraine and many other countries do not believe Ukraine's lack of contract was the reason for the shut-down. Instead, Russia was flexing its energy might over political ideology. Ukraine elected a democratic leader in its Orange Revolution and is introducing reforms with the aims to join the European Union and NATO.<sup>201</sup> The energy shut-off was viewed as Russian punishment for these Western leanings.<sup>202</sup> Moreover, the timing was far from coincidental as Ukraine's crucial parliamentary elections were less than three months away.<sup>203</sup>

Although Gazprom insisted that the shut-off was due to contract troubles, the method by which the gas was shut off illustrates otherwise.<sup>204</sup> It was President Putin and not Gazprom's president that announced the gas supply cuts.<sup>205</sup> Further, Russian state television broadcast the shut-down live, in a style reminiscent of Soviet propaganda.<sup>206</sup> Because Gazprom is a state-controlled entity, the Russian government was able to utilize the company to make political statements. Ironically, Russia's behavior coincided with the commencement of its chairmanship of the powerful Group of Eight (G8)—countries which are all industrialized with high standards of living.<sup>207</sup> Although Russia lacks the wealth of the other seven members of the G8, "in its ability to manipulate European supplies of natural gas, [it] is once again emerging as a superpower."<sup>208</sup>

Russia's use of its natural gas as a political weapon suggests it has pro-cartel tendencies. A cartel would no doubt benefit the government-controlled entity with access to a global natural gas market. In 2000, Gazprom produced 90% of total Russian gas output and controlled virtually all gas transported through high-pressure, large diameter pipelines.<sup>209</sup> The company is strengthening its hold in central Europe by purchasing interests in gas trading, distribution, importing, export pipelines, and engineering.<sup>210</sup> In addition, Russia already has attempted to influence gas prices through OPEC.<sup>211</sup> In 2002, Russia led unsuccessful efforts to persuade the rising OPEC to block European buyers from reselling their gas.<sup>212</sup> A resale ban is a favored Saudi Arabian tactic that allows producers to divide up the market and keep prices high.<sup>213</sup> To survive,

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200. *Id.*

201. Paul Reynolds, *Energy and the New World Power Play*, BBC NEWS, Jan. 1, 2006, available at <http://news.bbc.co.uk/1/hi/world/europe/4573944.stm>.

202. Anne Applebaum, *Playing Politics with Pipelines*, WASH. POST, Jan. 4, 2006, at A17, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/01/03/ar2006010301280.html>. The author's husband was recently named Poland's defense minister.

203. *Democracy's High Price*, *supra* note 199 (noting Ukraine's election date was March 26, 2006).

204. Applebaum, *supra* note 202.

205. *Id.*

206. Applebaum, *supra* note 202.

207. Reynolds, *supra* note 201.

208. Applebaum, *supra* note 202.

209. RUSSIA ENERGY SURVEY, *supra* note 171.

210. *Ivan at the Pipe*, *supra* note 187. Some of Gazprom's interests include: (1) 100% of Topenergy, a Bulgarian gas trading and engineering company; (2) 37% of Eesti, a Estonian gas distribution company; (3) 50% of Panrusgas, a Hungarian gas importing company; and (4) 48% of Europol Gaz, a Polish gas export pipeline. *Id.*

211. Coy & Bush, *supra* note 7, at 36.

212. *Id.*

213. Coy & Bush, *supra* note 7.

OPEC must entice Russia to join its cartel. Fortunately for OPEC, Russia's current attitude appears to favor price-fixing and "coordinated policy."<sup>214</sup>

## VI. EFFECTS OF OPEC

*"Public policy, unquestionably, favors competition in trade, to the end that its commodities may be afforded to the customer as cheaply as possible, and is opposed to monopolies, which tend to advance market prices, to the injury of the general public."*<sup>215</sup>

OPEC's presence will result in countless effects that may be described as beneficial or harmful depending on one's position in the market. Obviously, from a cartel member's perspective, OPEC would be a wonderful system. Like OPEC, OPEC's function would be to coordinate and unify its members' natural gas policies.<sup>216</sup> Although OPEC could claim its function is to promote stability and harmony in the gas market, in reality, stability and harmony is created through profit-making gas prices.<sup>217</sup>

OPEC's contention that its formation results in stable prices is only half the story. In a true free market system, competition results in the lowest possible prices. Cartel theory dictates that free markets result in the overproduction and overselling of oil and gas. The theory rationalizes that market control results in an efficient, economic, and regular supply of gas to consuming nations and a fair return on capital to those investing in the gas industry.<sup>218</sup> Without control, competition depresses prices, eventually decreasing incentives for exploration and production. Following this proposition to its natural conclusion, at lower oil and gas prices, consumers utilize more end-product which drives up demand and results in energy companies increasing efforts to find and recover oil and gas.

### A. Creation of an Oligopoly

Because OPEC is a cartel, its development signals the demise of the current free natural gas market and the beginning of an oligopoly. An oligopoly is characterized by few sellers who control all or most sales and interdependence between the sellers.<sup>219</sup> Like OPEC, OPEC will not be a true monopoly as it will not seek to drive other competitors out of the market.<sup>220</sup> Currently, the price of natural gas is set by the market and is directly related to its value. The prices are set by market participants for different locations and while there is no global spot price for natural gas, there are several regional prices such as Henry Hub and PG&E City Gate. The standard pricing format for natural gas is in U.S. dollars per million British thermal units (MMBTU) per day. To determine the price of gas, the daily or spot market provides current prices for gas at different locations for that-day delivery. The market value of natural gas is "a reflection of what the

214. *Id.* (quoting Alexander N. Ryazanov, Deputy Chairman of Gazprom).

215. *Cent. Ohio Salt Co. v. Guthrie*, 35 Ohio St. 666, 672 (1880) (emphasis added).

216. WHAT IS OPEC, *supra* note 24, at 3.

217. *Id.*

218. WHAT IS OPEC, *supra* note 24, at 1.

219. *Economics A-Z*, ECONOMIST.COM, at <http://www.economist.com/research/Economics> (last visited Mar. 5, 2006).

220. Andrew C. Udin, *Slaying Goliath: The Extraterritorial Application of U.S. Antitrust Law to OPEC*, 50 AM. U. L. REV. 1321, 1329 (2001).

majority of the market perceives to be the value of the product, and is what the commodity is actually worth at that specific point in time."<sup>221</sup> The result is an efficient market.

Conversely, a cartel is a formal price-fixing agreement.<sup>222</sup> Cartels exercise horizontal price fixing, which means that "the conspirators operate at the same level and would be rivals in the absence of an agreement."<sup>223</sup> Cartels use price agreements to maximize industry profit.<sup>224</sup> OPEC could act either as a price-control cartel where it would "set" the price of natural gas, or as an excess-capacity cartel where it determines the amount of capacity to release and in doing so affects the price. OPEC functions as an excess capacity-control cartel. OPEC members, which produce about 40% of the world's crude oil and 15% of its natural gas, have an excess of crude oil that is available for export.<sup>225</sup> By agreeing to a decrease or increase in an excess capacity release, the price of crude oil rises or falls.<sup>226</sup>

Even if the free gas market does not dissolve, the rise of LNG as the transportation mechanism will shift current pricing. Natural gas pricing depends on the location of the gas. Gas prices are less expensive in supply areas where there is an abundance of natural gas reserves, rather than demand areas, where there is high industrial or residential consumption.<sup>227</sup> As LNG becomes indispensable, the location of new LNG terminals will similarly affect pricing dynamics over time.<sup>228</sup> For example, if California received two Bcf per day from a Baja California terminal and one Bcf per day from a northern California terminal, local gas prices could drop by about one dollar per MMBTU.<sup>229</sup> It is obvious that the most significant consequences of OPEC formation will be the market changes.

### B. Volatility

Cartels incorrectly contend that their presence ensures the stabilization of prices in international markets with a view to eliminating harmful and unnecessary fluctuations.<sup>230</sup> Of course, cartels' first consideration is for the interests of supply members and the necessity of securing a steady income.<sup>231</sup> Moreover, geo-politics heavily influence cartels so it is their inherent nature to be volatile. For example, in October 1973, on Yom Kippur, Egyptian and Syrian armies carried out a surprise attack on Israeli positions in the Gaza Strip and the

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221. See STURM, *supra* note 51, at 27.

222. ROGER D. BLAIR & DAVID L. KASERMAN, *ANTITRUST ECONOMICS* 132 (Richard D. Irwin, Inc. 1985).

223. *Id.* at 1.

224. BLAIR & KASERMAN, *supra* note 222, at 133.

225. WHAT IS OPEC, *supra* note 24, at 9.

226. Please note that crude oil refers only to pre-refined oil and does not include oil products such as gasoline or heating oil.

227. See STURM, *supra* note 51, at 11.

228. Jodi Wetuski, *U.S. LNG: More Questions than Answers*, PETROLEUM FIN. WEEKLY, Feb. 2, 2004, at 2.

229. *Id.*

230. WHAT IS OPEC, *supra* note 24, at 1.

231. *Id.*

Golan Heights.<sup>232</sup> In response to Soviet-sent supplies to Egypt and Syria, the United States carried emergency aid supplies to Israel.<sup>233</sup> Saudi Arabia cut off oil exports to the U.S. and OPEC members followed suit. Almost overnight, crude oil prices doubled.<sup>234</sup>

Energy cartels cannot easily exercise control over oil and gas commodity markets. In the past the OPEC cartel attempted to control oil prices by adding or withholding production.<sup>235</sup> The oil shortages of the 1970s resulted from OPEC engineering, not from a true lack of oil supply.<sup>236</sup> Recently, OPEC has been unable to predict or meet market fluctuations. In 1997, OPEC ramped up supplies, but could not reduce production in time during the 1998 Asian economic crisis.<sup>237</sup> As a result, oil prices dropped to ten dollars per barrel.<sup>238</sup> OPEC's post-1998 cuts resulted in prices increasing to over \$30 per barrel by 2000, but in 2001 the American stock market fall caused by the September 11 aftermath and Enron's collapse sent oil back down to \$15.<sup>239</sup> Reacting to the recession, OPEC again cut production, but now prices are surging toward the \$60 mark.<sup>240</sup> Global events, regional catastrophes, and the interplay of economics govern global commodity markets. Since OPEC will not be able to accurately predict these events, its intervention would only hamper stable and efficient pricing.

### C. Lack of Economic Oversight

It is inevitable that OPEC will be prone to inter-member cheating and lack transparency. The basic foundation of a "successful" cartel is that each member obeys the orders of the cartel.<sup>241</sup> However, as OPEC has constantly illustrated, it is extremely difficult for cartel members to sacrifice their personal benefits for the organization's gain. "[E]conomic history has shown that cartels tend to be highly unstable unless some means is found to compel adherence to the price and output quotas set for each firm."<sup>242</sup> This unwillingness to obey stems not from arrogance or pride, but from greed.<sup>243</sup> However, cheating the members inevitably destroys the price-fixing agreements and damages the cartel's reputation. This damage can result in the weakening of the cartel's perceived power, particularly in cartels like OPEC that claim to be "benign." The lack of enforcement is a major challenge because cartel agreements must include their own enforcement rules. The ability of a cartel to punish cheating members is essential because cartels are precluded from seeking remedies through some

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232. John Cassidy, *Pump Dreams*, NEW YORKER, Oct. 11, 2004, available at [http://www.newyorker.com/printables/fact/041011fa\\_fact](http://www.newyorker.com/printables/fact/041011fa_fact).

233. *Id.*

234. Cassidy, *supra* note 232.

235. John W. Schoen, *OPEC Says it's Lost Control of Oil Prices*, MSNBC, Mar. 15, 2005, available at <http://msnbc.msn.com/id/7190109/>.

236. *Id.*

237. Schoen, *supra* note 235.

238. *Id.*

239. Schoen, *supra* note 235.

240. *Id.*

241. BLAIR & KASERMAN, *supra* note 222, at 141.

242. *Id.*

243. BLAIR & KASERMAN, *supra* note 222.

judicial systems—for example, in the United States “courts will not remedy the breach of an illegal contract.”<sup>244</sup>

The lack of transparency also affects cartels. OPEC members rarely release data relating to the amount of money invested in their oil industry as they consider it a national strategic secret.<sup>245</sup> In fact, OPEC members likely will conceal any decline in their reserves and may even provide false assurances that they are able to meet world demand. This lack of quality information and market transparency contributes to volatility and uncertainties.<sup>246</sup> Efficient markets require co-operation between gas producers, consumers, and market participants to ensure market decisions are based on timely, reliable, and transparent information.<sup>247</sup>

#### D. Import Unions

For every action there is an opposite and equal reaction. Because China and India are large users of natural gas and would be heavily affected by OPEC's decisions, they may form countervailing competing organizations. These competing organizations would essentially act as import unions that would ensure large natural gas users are not taken advantage of and have input in the gas price or release of capacity.<sup>248</sup> Import unions are particularly powerful if there are other non-OPEC suppliers of natural gas.

Asian countries, with the exception of Japan, and including China and India, currently pay a premium over the United States and Europe.<sup>249</sup> In the second quarter of 2004, Asian countries paid \$0.36 per barrel more than the U.S. and almost \$3 per barrel more than European countries.<sup>250</sup> According to Japan's Institute of Energy Economics, the premium costs between \$5 billion and \$10 billion per year to Asian countries.<sup>251</sup> India met with OPEC in September 2004 to discuss adoption of a uniform pricing policy for all crude oil buyers.<sup>252</sup> India's Petroleum Minister, Mani Shankar Aiyar, stated that “[a]ny measure that erodes the advantage of geography for Asian countries and promotes the accelerated depletion of oil resources through a policy of subsidizing oil traffic to distant destinations is not, and cannot be, in the interests of sustainable development . . . .”<sup>253</sup> The unfair treatment by OPEC is only more incentive for India and China, and other Asian consumers such as South Korea and Japan, to form natural gas import unions to prevent partial pricing.

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244. Ian Ayres, *How Cartels Punish: A Structural Theory of Self-Enforcing Collusion*, 87 COLUM. L. REV. 295, 297 (1987).

245. Carola Hoyos, *OPEC Exploration Declining Despite Rising Prices*, ENERGY BULLETIN, Aug. 25, 2004, available at <http://www.energybulletin.net/1740.html>.

246. Steve Evans, *IMF Worried About Oil Price Rises*, BBC NEWS, Oct. 2, 2004, available at <http://news.bbc.co.uk/1/hi/business/3710828.stm>.

247. *Id.*

248. Interview with Dr. Gregory S. Crespi, Professor of Law, SMU Dedman School of Law, in Dallas, Tex. (Feb. 25, 2005).

249. Indo-Asian News Service, *India Asks OPEC for Uniform Pricing Policy*, ENERGY BULLETIN, Sept. 17, 2004, [hereinafter Indo-Asian News Service], available at <http://www.energybulletin.net/2137.html>.

250. *Id.*

251. Indo-Asian News Service, *supra* note 249.

252. *Id.*

253. Indo-Asian News Service, *supra* note 249.



### E. Violation of Antitrust Law

In the United States, the Sherman Act was enacted in 1890 to promote competitive markets.<sup>254</sup> It prohibits contracts that restrain trade or commerce among the states or with foreign nations.<sup>255</sup> More importantly, it disallows agreements between parties that unreasonably restrain competition,<sup>256</sup> referring to them as “unfair methods of competition.”<sup>257</sup>

The Sherman Act, which is infamous for its role in the dissolution of Standard Oil, prohibits both explicit and implicit agreements among competitors.<sup>258</sup> In order to find an illegal conspiracy, “there must be direct or circumstantial evidence that reasonably tends to prove that the [parties] . . . had a conscious commitment to a common scheme designed to achieve an unlawful objective.”<sup>259</sup>

The United States Supreme Court has held that “restrictions on free and open price competition pose an ‘actual or potential threat to the central nervous system of the economy.’”<sup>260</sup> Consequently, agreements between competitors to determine or set prices are per se unlawful.<sup>261</sup> The definition of price fixing includes any agreement that has the effect of “‘raising, depressing, fixing, pegging, or stabilizing the price.’”<sup>262</sup> Not only does OPEC discuss pricing, but it also proposes agreements on profit margins and other variables that directly affect price and output level.<sup>263</sup> Although OPEC has declared that its actions in fixing the price of oil are supposedly benign, under the Sherman Act, OPEC should be subject both to civil and criminal liability.<sup>264</sup>

The reality is that American courts are reluctant to become involved with OPEC. In *International Ass’n of Machinists & Aerospace Workers v. Organization of Petroleum Exporting Countries*, the District Court dismissed the suit on grounds of sovereign immunity.<sup>265</sup> On appeal, the Ninth Circuit agreed that the suit should be dismissed, but argued that the dismissal should be based on state grounds.<sup>266</sup> “The court emphasized that the private action might interfere with sensitive diplomatic relationships and pointed out that there existed no international rule condemning the maintenance of cartels or of production quotas by sovereign nations.”<sup>267</sup> “The United States and other nations have supported the principle of supreme state sovereignty over natural

254. See generally MARK R. JOELSON, AN INTERNATIONAL ANTITRUST PRIMER: A GUIDE TO THE OPERATION OF UNITED STATES, EUROPEAN UNION, AND OTHER KEY COMPETITION LAWS IN THE GLOBAL ECONOMY (Kluwer Law Int’l 2d ed. 2001).

255. 15 U.S.C. § 1 (2000).

256. ABA SECTION OF ANTITRUST LAW, ENERGY ANTITRUST HANDBOOK: A GUIDE TO THE ELECTRIC AND GAS INDUSTRIES 113 (2002) [hereinafter ANTITRUST HANDBOOK].

257. 15 U.S.C. § 45 (2000).

258. ANTITRUST HANDBOOK, *supra* note 256.

259. *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 768 (1984).

260. ANTITRUST HANDBOOK, *supra* note 256, at 113–14 (quoting *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 224–26 (1940)).

261. *Id.* at 114.

262. ANTITRUST HANDBOOK, *supra* note 256, at 114 (quoting *Socony-Vacuum Oil Co.*, 310 U.S. at 223).

263. SKEET, *supra* note 8.

264. ANTITRUST HANDBOOK, *supra* note 256, at 114.

265. *Int’l Assoc. of Machinists & Aerospace Workers v. OPEC*, 477 F. Supp. 553 (C.D. Cal. 1979).

266. JOELSON, *supra* note 254, at 62.

267. *Id.*

resources.”<sup>268</sup> These private cases can have a major impact on U.S. relations with foreign organizations and countries.<sup>269</sup> There is a special problem when dealing with foreign governments as anticompetitive actors.<sup>270</sup> If a sovereign state “restrains trade, or commands a private party to restrain trade within its territory,” these actions are defenses to any American antitrust charge.<sup>271</sup> However, if a government activity is commercial in nature, antitrust law can be applied directly against the sovereign government.<sup>272</sup> OPEC suits have arisen with complainants arguing that OPEC is a commercial activity. However, the Ninth Circuit failed to analyze whether the activity was commercial or “whether the challenged activity took place wholly within the territorial boundaries of the nations involved.”<sup>273</sup> Courts have decided that if the activity is a vital part of the sovereign country, then it is sovereign and political, not commercial.<sup>274</sup> Finally, “a direct suit against a sovereign for its sovereign activities will be dismissed under the ‘sovereign immunities’ doctrine.”<sup>275</sup> Under the doctrine, the U.S. courts will not decide the “legality of an action of a foreign sovereign.”<sup>276</sup>

With this unforgiving statute and a history of strictly enforced domestic case law, it is surprising that the United States would raise little objection to OPEC’s committal of blatant antitrust violations. In fact, by not arguing against OPEC’s price fixing, the United States is condoning the action internationally, while condemning it domestically. This contradictory stance could influence the formation of OPEC as energy cartels realize they have no opposition.

#### F. Eventual Collapse of OPEC

One can argue that OPEC is not sustainable and may eventually collapse. OPEC’s foundation rests on the control of excess supply and when that supply dwindles, it will no longer maintain power over oil markets. Analysts believe that OPEC’s members are nearing maximum production and will be powerless if prices continue to rise even though OPEC continues to provide false assurances that they are “making fundamental changes to address the tightest supply-demand environment in decades.”<sup>277</sup> The market is setting the price and so OPEC’s decisions will have no practical physical impact on the market.<sup>278</sup> OPEC members are currently collectively pumping at the highest rate in a quarter-century.<sup>279</sup> Even if OPEC officially suspended its quotas, the “message

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268. *Int’l Assoc. of Machinists & Aerospace Workers v. OPEC*, 649 F.2d 1354, 1361 (9th Cir. 1981).

269. Donald I. Baker, *The Impact of U.S. Antitrust Laws on Overseas Operations of U.S. Oil Companies*, in ROBERT C. GOODWIN, JR. & DUKE R. LIGON, *DEVELOPMENTS IN WORLD OIL MARKETS* 32 (Practising Law Inst. 1980).

270. *Id.* at 41.

271. Baker, *supra* note 269, at 41 (citing *Bates v. State Bar of Ariz.*, 433 U.S. 350 (1977)).

272. *Id.* (citing *Bates*, 433 U.S. at 350).

273. JOELSON, *supra* note 254, at 62.

274. Baker, *supra* note 269, at 41–42 (citing *Int’l Assoc. of Machinists & Aerospace Workers v. OPEC*, 477 F. Supp. 553 (C.D. Cal. 1979)).

275. *Id.* at 42.

276. Baker, *supra* note 269.

277. Sudeep Reddy, *Meeting the Demand for Oil*, ENERGY BULLETIN, Sept. 14, 2004, available at <http://energybulletin.net/2089.html>.

278. *Id.* (quoting Larry Goldstein, President of Petroleum Industry Research Foundation).

279. Reddy, *supra* note 277.

would be entirely psychological, with no real effect on supply and demand.”<sup>280</sup> “Most of the [eleven] members have no additional oil to offer the market.”<sup>281</sup> Iraq is one of the few members with the capacity to pump more crude oil, but has been set back due to attacks on its oil installations and other infrastructure. With no excess capacity to spare, it is likely that oil prices will fall once they reach the peak price that stifles demand.<sup>282</sup> Similarly, if OGEC does not maintain excess capacity able to meet demand, OGEC too could lose power and eventually collapse.

## VII. STRATEGIES TO PREVENT OR MITIGATE OGEC’S FORMATION

*“Formula for success: Rise early, work hard, strike oil.”*

**- J. Paul Getty**

The OGEC is developing, but energy companies can take the following actions to prevent or mitigate its efforts.

### A. Prevention of OGEC’s Establishment

The establishment of a global cartel requires a global solution. Countries entering into contracts with OGEC members must promote and utilize anti-competition laws, which are currently regionally-based.<sup>283</sup> To combat OGEC’s presence, the United Nations (UN) through the World Trade Organization or the Organization for Economic Cooperation and Development (OECD) must promote the use of international anti-competition laws. Currently the UN promotes competition through its Conference on Trade and Development (UNCTAD), which developed the Model Law on Competition.<sup>284</sup>

Companies must invest in research and development to advance natural gas exploration and production technology.<sup>285</sup> For example, “[a]fter World War I, [the] seismic technology, used for locating enemy artillery, was adapted to oil field exploration.”<sup>286</sup> Currently, the technology exists that places microcomputers on drill-bits. This placement allows for more exact oil exploration and production, which “could make 125 billion barrels of oil available that previously were not economic to produce.”<sup>287</sup> The objective of the R&D should be to create a diversified portfolio of activities with varying completion times.<sup>288</sup>

Technology research and development not only includes upstream technology, but also consumer-based technology, which can be an effective

280. *Id.*

281. Reddy, *supra* note 277.

282. Carola Hoyos, *supra* note 245.

283. JOELSON, *supra* note 254, at 62.

284. Joel Brandon Moore, *The Natural Law Basis of Legal Obligation: International Antitrust and OPEC in Context*, 36 VAND. J. TRANSNAT’L L. 243, 263–64 (2003).

285. William Cattan, Latham & Watkins LLP, Excerpts from Remarks to the 4th Annual Qatar Conference on Democracy and Free Markets 4 (Apr. 5, 2004), available at [http://www.lw.com/resource/Publications/\\_pdf/pub1009\\_1.pdf](http://www.lw.com/resource/Publications/_pdf/pub1009_1.pdf) (discussing politics and economics of energy in the next generation).

286. Daniel Yergin, *Imagining a \$7-a-gallon Future*, N.Y. TIMES, Apr. 4, 2004.

287. Cattan, *supra* note 285.

288. Daniel Yergin, *Energy Security in the 1990s*, 67 FOREIGN AFFAIRS 110, 131 (1998).

method to reduce energy dependence.<sup>289</sup> In his 2006 State of the Union Address, President Bush stated that a competitive America required decreasing the country's "addiction" to oil.<sup>290</sup> The President announced the creation of the Advanced Energy Initiative.<sup>291</sup> This Department of Energy initiative will increase clean-energy research by 22%.<sup>292</sup> Through this research, the President aims to replace more than 75% of American oil imports from the Middle East by 2025.<sup>293</sup> Technology, as President Bush indicated, also means researching alternate energy sources. By reducing dependence on natural gas, countries need not worry about natural gas cartels. Unlike many European countries, France no longer worries about being held hostage to an oil or gas cartel.<sup>294</sup> Since the 1970 oil embargo, France has employed a strategy of energy independence by building nuclear power plants.<sup>295</sup> Currently, almost 80% of the country's power comes from nuclear energy. In fact, the country sells its spare capacity to the United Kingdom.<sup>296</sup>

### B. Mitigation of OGEC's Establishment

It is vital that countries privatize state-controlled energy companies. State-controlled companies often lack the competitive edge that drives private sector energy companies. National oil companies hold 80% of the world's oil reserves, but invest relatively little in exploration.<sup>297</sup> Private companies hold only 20% of the world oil reserves and 30% of the world's gas reserves, but accounted for two thirds of the world's new discoveries during 1999–2003.<sup>298</sup> The five largest majors—ExxonMobil, Royal Dutch/Shell, BP, Total, and ChevronTexaco—hold only 5% of the world oil reserves and 4% of the gas reserves, but are responsible for 20% of new field discoveries.<sup>299</sup>

Corruption and job security are two conflicts that can arise when state-controlled companies examine future plans. The OECD reported that while employment in Russia's gas industry increased by over 80% from 1997 to 2003, productivity dropped by 40%.<sup>300</sup> Privatization frees management from government oversight. It allows companies to "pursue . . . politically sensitive decisions such as redirecting investment spending overseas, and undertaking

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289. George W. Bush, U.S. President, State of the Union Address (Jan. 31, 2006), [hereinafter State of the Union], available at <http://www.whitehouse.gov/stateoftheunion/2006/print/index.html>.

290. *Id.*

291. State of the Union, *supra* note 289.

292. *Id.* The Initiative will focus on changing energy sources for homes and offices to zero-emission coal-fired plants, solar and wind technologies, and nuclear energy. The Initiative will also increase automobile research into hybrid and electric cars, as well as hydrogen cars, and agricultural-commodity derived ethanol. State of the Union, *supra* note 289.

293. *Id.*

294. Reynolds, *supra* note 201.

295. *Id.*

296. Reynolds, *supra* note 201.

297. Doris Leblond, *Oil Market Shock is Still Possible, IFP President Says*, OIL & GAS J., Feb. 14, 2005, at 28 (citing Olivier Appert, President of Institut Francais du Petrole).

298. *Id.*

299. Leblond, *supra* note 297.

300. Jason Bush, *The Bigger Gazprom Grows, The Further Russia Backslides*, BUS. WK., Dec. 20, 2004, at 53.

downsizing initiatives.”<sup>301</sup>

Russia’s recent menacing behavior has caused many nations, especially those in Europe, to question their dependence on Russian gas.<sup>302</sup> The German government is already examining the wisdom of a multi-billion dollar deal with Russia to build a pipeline under the Baltic Sea.<sup>303</sup> These doubts and fears will eventually lead foreign developers to avoid Russian investments and joint ventures. The privatization of state-owned or controlled companies removes politics (to a certain extent) from the equation and focuses on economics. Had Gazprom been privately-owned, its independent executive and shareholders would have disallowed the cuts to Ukrainian gas supply as a method of political intimidation. If there was a true contractual dispute, a private Gazprom would have engaged in negotiations or mediation before taking any drastic action.

Companies must ensure that contracts entered into with OPEC members contain dispute resolution clauses. These company negotiators and transactional attorneys should ensure that contracts contain firm international arbitration and mediation clauses. OPEC members may not favor concession agreements with international arbitration clauses. Instead, they may prefer to settle disputes within the framework of their court system. To combat this preference, contracting companies should contractually establish a uniform method of resolution. Companies should be cautious in demanding arbitration because the demand could affect their long term relationship with the other party, especially if it is a government party.<sup>304</sup> Companies must take account of the “possibility that the other party (rightly or wrongly) may under some circumstances perceive the commencement of arbitration as a hostile act.”<sup>305</sup> The decision to arbitrate is not one to be taken lightly or in haste.<sup>306</sup>

Lastly, countries should avoid implementing sanctions.<sup>307</sup> “Unilateral sanctions are not an effective policy tool.”<sup>308</sup> Even if multilateral sanctions are used, the sanctions should be as targeted as possible. Moreover, the “value of multilateral sanctions should be weighed against the value of engagement and dialogue.”<sup>309</sup> Under sanctions, energy-rich countries become constrained and unable to contribute to the global energy market.

Iran now faces threats of sanctions as tensions run high between it and the United Nations over Iran’s nuclear ambitions.<sup>310</sup> Although Iranian Oil Minister

301. ENERGY INFO. ADMIN., U.S. DEP’T OF ENERGY, PRIVATIZATION AND THE GLOBALIZATION OF ENERGY MARKETS v (1996), available <http://tonto.eia.doe.gov/FTP/ROOT/financial/060996.pdf>.

302. Peter Finn, *Russia Reverses Itself on Gas Cuts*, WASH. POST, Jan. 3, 2006, at A12, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/01/02/AR2006010200828.html>.

303. *Id.*

304. See generally H. Francis Shattuck, Jr., *Disputes Settlement in International Oil Agreements*, in ROBERT C. GOODWIN, JR. & DUKE R. LIGON, DEVELOPMENTS IN WORLD OIL MARKETS: PRACTICE AND LEGAL CONSIDERATIONS 91 (Practising Law Inst. 1980).

305. *Id.*

306. Shattuck, *supra* note 304.

307. *The Geopolitics of Energy into the 21st Century: Hearing Before the S. Comm. on Energy & Natural Resources*, 107th Cong. (2001) [hereinafter *Geopolitics of Energy*] (testimony of Guy F. Caruso, Director, Strategic Energy Initiative, Center for Strategic and International Studies), available at <http://www.csis.org/media/csis/congress/ts01032/caruso.pdf> (last visited Mar. 5, 2006).

308. *Id.*

309. *Geopolitics of Energy*, *supra* note 307.

310. Peg Mackey & Janet McBride, *OPEC Seals Deal to Keep Pumping Near Maximum*, YAHOO! NEWS,

Kazem Vaziri has stated that Iran will not mix “politics with the economic decisions,” the five permanent members of the United Nations Security Council already decided that the International Atomic Energy Agency should report to the Security Council on Iran.<sup>311</sup> This decision concerns OPEC about the possibility of supply disruptions from its second biggest producer.<sup>312</sup> If sanctions are imposed, Iran may not be the only OPEC member to withdraw supplies. Venezuela is backing Iran and has offered its support.<sup>313</sup> Although the object of the sanction is to “punish” the country, the end-effect of curtailing oil and gas production is to punish energy consumers with high commodity prices.

#### VIII. CONCLUSION

*“Market order requires the support of all parties.”*

##### - OPEC

Experts argue that the natural gas industry “will have a far-reaching impact on the world economy, bringing new opportunities and risks, new interdependencies and geo-political alignments.”<sup>314</sup> Although some analysts anticipate that the LNG trade will produce new interests and interdependencies, others worry that it will only lead to import dependence for yet another vital commodity, which will in turn create vulnerability to political and economic ploys.<sup>315</sup> History teaches us that the latter result is more probable than the former. The world should prepare itself for the rise of the natural gas cartel.

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Jan. 31, 2006, at <http://english.epochtimes.com/news/6-1-31/37605.html>. *OPEC Holds Output, Prices Fall Below \$68*, PETROLEUM NEWS, Feb. 5, 2006, at 8, available at <http://www.petroileumnews.com/pdfarch/61816579.pdf>.

311. Mackey & McBride, *supra* note 310.

312. *Id.*

313. Mackey & McBride, *supra* note 310.

314. Igbikiowubo, *supra* note 57.

315. *Id.*