

THE WAR ON ENERGY: WHY THE UNITED STATES AND THE INTERNATIONAL COMMUNITY NEED COHESIVE ENERGY INFRASTRUCTURE SECURITY POLICY

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I. INTRODUCTION

There is little debate that since the terrorist attacks of September 11, 2001, and the conflicts in Afghanistan and Iraq, terrorism has been a significant topic of U.S. legislation.¹ Moreover, the local gas station marquee demonstrates the impact catastrophic events affecting energy facilities have on the American pocketbook.² Legislators and experts recognize, however, that natural disasters are not the sole cause of the spike in energy prices.³ The importance of securing energy assets from terrorism is gaining both domestic and international recognition.⁴ Legislators and experts have recently gone before the House Subcommittee on International Terrorism and Nonproliferation to discuss the topic of energy security.⁵ The

1. See Legislation Related to the Attack of September 11, 2001, <http://thomas.loc.gov/home/terrorleg.htm> (last visited Jan. 27, 2007). This website tracks the legislation related to the attacks of September 11, 2001 and demonstrates the vast amount of antiterrorism legislation promulgated since that day. *Id.*

2. See, e.g., *Post-Rita Gas Prices Up Another 10 Cents*, CHI. TRIB., Oct. 10, 2005, at 18.

3. See *Terrorist Threats to Energy Security: Hearing Before the Subcomm. on Int'l Terrorism and Nonproliferation of the Comm. on H. Comm. Int'l Relations*, 109th Cong. 1 (2005) [hereinafter *Energy Security Hearing*] (statement of Rep. Ed Royce, Chairman, H. Subcomm. on Int'l Terrorism and Nonproliferation) (suggesting a "terror premium" is being added into oil prices).

4. See *id.*; see also Institute for the Analysis of Global Security (IAGS), NATO Forum on Energy Security & Technology, <http://www.iags.org/natoforum.htm> (last visited Jan. 27, 2007) [hereinafter *Energy Security Forum*] (discussing the NATO Forum that specifically addressed the issue of energy security).

5. See *Energy Security Hearing*, *supra* note 3, at 16 (statement of Gal Luft, Executive Director, IAGS).

international community is also turning its focus to the security of energy infrastructure.⁶

The purpose of this Comment is to suggest the need for specific domestic and international legislation that would ensure the security of energy infrastructure. This issue has particular relevance given the lack of clearly unified energy security legislation in the United States and the conspicuous silence of the Energy Policy Act of 2005 regarding the security of non-nuclear energy infrastructure.⁷ The topic of energy security has further significance internationally because energy assets worldwide have been terrorist targets in the past and there is indication they will continue to be in the future.⁸ Furthermore, the North Atlantic Treaty Organization (NATO) is becoming increasingly interested in the issue of energy security,⁹ which may help pave the way for United Nations energy security guidelines.

The first section of this Comment is a historical analysis of terrorist attacks on international energy assets and the measures nations have taken in response. This Comment will not address issues regarding the jurisdictional authority of nations to protect their energy assets abroad, though it will discuss the lengths to which some nations have gone to do so. Additionally, this Part will include a survey of the evidence indicating the intention of terrorist organizations to continue to target energy assets worldwide. This Part will also highlight a recent study called *Oil Shockwave*. This study primarily called

6. See Interview by Europe Energy with Geert Joosten, Chairman of the European Platform of Energy Infrastructure Security (Sept. 9, 2005) [hereinafter *European Platform*] (discussing the European Commission's policy toward energy security).

7. See Energy Policy Act of 2005, 42 U.S.C. §§ 15801–16524 (2005).

8. See *Energy Security Hearing*, *supra* note 3, at 1 (statement of Rep. Ed Royce, Chairman, House Subcomm. on Int'l Terrorism and Nonproliferation) (referring to a posting on an al-Qaeda website entitled "Map of Future al-Qaeda Operations" claiming Middle East oil facilities would continue to be priority targets).

9. See Energy Security Forum, *supra* note 4.

attention to U.S. dependence on oil by playing out fictionalized scenarios such as terrorist attacks on energy facilities.¹⁰

The primary analysis of this Comment focuses on the need for clear domestic and international energy security legislation. This Comment discusses the U.S. enactment of the Maritime Transportation Security Act of 2002 (MTSA) and determines that it could serve as model legislation for federal energy infrastructure security policy. Moreover, this Comment suggests the need for United Nations involvement in the development of international energy asset security guidelines. This Comment focuses on the International Atomic Energy Agency's (IAEA) efforts in securing nuclear energy sources and the International Maritime Organization's (IMO) role in developing an international framework for maritime security. Finally, this Comment discusses NATO's current focus on energy security¹¹ and suggests that the United Nations needs to take more initiative in this arena.

II. THE PAST, PRESENT, AND FUTURE OF TERRORIST ATTACKS AGAINST ENERGY INFRASTRUCTURE

A. *The Past and Present*

History suggests that energy infrastructure is a preferred target for terrorist organizations worldwide.¹² The insurgency in Iraq is strong evidence of this argument,¹³ but energy terrorism has not been isolated to the Middle East.¹⁴ Moreover, national responses to these attacks have been varied.¹⁵

10. See *Energy Security Hearing*, *supra* note 3, at 5–8 (statement of Robbie Diamond, President, Securing America's Future Energy (SAFE)) (describing the study's three scenarios).

11. See Energy Security Forum, *supra* note 4.

12. See *infra* Part II.A.1–3.

13. See IAGS, Iraq Pipeline Watch, <http://www.iags.org/iraqpipelinewatch.htm> (last visited Jan. 27, 2007) [hereinafter Iraq Pipeline Watch] (listing various attacks on oil installations in Iraq since 2003).

14. See generally Gal Luft, *Pipeline Sabotage is Terrorist's Weapon of Choice: Assaults on Oil Infrastructure Have Added a Fear Premium of Roughly \$ 10 Per Barrel*, PIPELINE & GAS J., Feb. 2005, at 42–44 (describing attacks on energy assets in nations around the world).

15. See *infra* Part II.A.1–3.

1. *Colombia's Fight to Save a Pipeline*

Colombia is a leading example of a nation plagued by terrorist destruction of energy assets. Occidental Petroleum discovered oil in Colombia in the early 1980s and began the Cano Limon oilfield.¹⁶ The two major Colombian terrorist organizations, the National Liberation Army (ELN) and the Revolutionary Armed Forces of Colombia (FARC), have targeted Occidental's pipelines extending from the Cano Limon Oilfield since its inception.¹⁷ The terrorist groups treated bombing the pipeline as a fundraising activity, allowing them to extort money from Occidental and its subcontractors.¹⁸ In the late 1990s, the attacks on the pipeline greatly increased, and between February and May 2001, Occidental pumped oil for a total of only thirty hours.¹⁹ The attacks on the Cano Limon pipeline became so numerous it earned the moniker of "the flute."²⁰

Occidental leadership grew weary of the constant pipeline repairs, and in May 2001, threatened to shut down operations entirely.²¹ The Colombian government quickly responded to Occidental's announcement.²² On the same day as Occidental's meeting with Colombian officials, Colombia's head of paramilitary forces reported they would meet the terrorists head on.²³ Though the Colombian ambassador to Washington denied any connection between Occidental's announcement and the paramilitary leader's declaration, the Colombian government also dispatched troops to the embattled region.²⁴ Additionally, the Colombian government commissioned a team of special

16. T. Christian Miller, *U.S. Troops Answered Oil Firm's Pleas*, L.A. TIMES, Dec. 28, 2004, at A18 [hereinafter Miller, *Troops*].

17. *See id.* ELN are the Spanish initials for National Liberation Army. *Id.* FARC are the Spanish initials for Revolutionary Armed Forces of Colombia. Sharon Behn, *Colombian Violence Spills Over*, WASH. TIMES, Sept. 20, 2005, at A1.

18. *See* Miller, *Troops*, *supra* note 16.

19. *Id.*

20. Luft, *supra* note 14, at 42.

21. Miller, *Troops*, *supra* note 16.

22. *Id.*

23. *Id.*

24. *Id.*

prosecutors in its crackdown on the terrorist groups.²⁵ Occidental helped to fund this team, adding to the dollars it was already paying for the Colombian military's efforts in security.²⁶

Later that same year, on September 11th, the United States was attacked by terrorists.²⁷ This event sparked the United States to rethink its aid policies towards Colombia, which had largely been directed at the drug trade.²⁸ The U.S. administration drew up a plan, with a \$98 million budget request for Congress, to deploy U.S. Special Forces soldiers to Colombia to train local military in pipeline security operations.²⁹

The success of the joint Colombia-U.S. initiative against the terrorist groups is debatable, but in December 2001, Occidental reported only one attack on its pipeline.³⁰ Furthermore, studies show that attacks against oil assets in Colombia declined by fourteen percent since the inception of the Colombian energy infrastructure security plan.³¹ Additionally, Colombia's state oil company expects production to rise from 292,000 to 400,000 barrels per day by 2010.³²

2. *Creative Energy Terrorism in Chechnya*

Russia is the world's second largest exporter of oil. Its energy infrastructure has also been the target of terrorism.³³

25. *Id.*

26. *Id.* (stating that Occidental pledged \$800,000 of support for the team; however, Occidental executives said they paid far less than this amount). Furthermore, Occidental had been making payments of between \$5 and \$15 million a year for security expenses and reimbursement to the Colombian military. *Id.*

27. *E.g.*, Don Van Natta & Lizette Alvarez, *A Day of Terror: Attack on Military*, N.Y. TIMES, Sept. 12, 2001, at A5.

28. *See* Miller, *Troops*, *supra* note 16.

29. *Id.* (noting that 2,000 Colombian soldiers have been trained in pipeline protection); *see also* Ana Carrigan, *War and Hope in Colombia*, IN THESE TIMES, Jan. 3, 2005, at 6 (suggesting U.S. Special Forces soldiers are guarding the Occidental pipeline themselves).

30. Miller, *Troops*, *supra* note 16. *But see* Carrigan, *supra* note 29 (suggesting the Colombia-U.S. effort has largely failed and that the oil-rich region is more violent now than it has been in the past).

31. Terrence Murray, *Rebel Group's Plea to UN Could Offer Hope to Colombian Oil Production*, OIL DAILY, Dec. 30, 2004.

32. *Id.*

33. Luft, *supra* note 14, at 43.

Chechen terrorists have targeted pipelines in Dagestan, Moscow, and other regions in Russia.³⁴ The Chechen separatists have been creative with their energy terrorism; they have not been content to merely destroy energy infrastructures.³⁵ The Russian Interior Ministry has reported that “criminal gangs” pilfer and sell approximately one third of the oil produced in Chechnya to fund future terrorist activities.³⁶ Russian authorities have responded by closing down illegal refineries and detaining illegal holding tanks.³⁷

3. *The War . . . on Energy Infrastructure . . . in Iraq*

The insurgency currently underway in Iraq is perhaps the starkest example of the desire of terrorist groups to target energy infrastructure.³⁸ Nearly 300 attacks on pipelines have occurred in Iraq since the end of major combat operations.³⁹ These attacks occurred all over the country,⁴⁰ from the major export artery originating in the northern city of Kirkuk, leading to the Ceyhan terminal in Turkey,⁴¹ to the major oil installations of Basra, which account for more than two-thirds of Iraq’s oil production.⁴² These attacks have resulted in an estimated \$10 billion loss of oil revenues in Iraq, not to mention the heavy toll they have taken on the national rebuilding effort.⁴³

34. *Id.*

35. See Roman Kupchinsky, *Chechnya: Stolen Oil and Purchased Guns*, GLOBALSECURITY.ORG, Oct. 2005, <http://www.globalsecurity.org/military/library/news/2005/10/mil-051025-rferl04.htm> (describing the Chechen rebels’ activity of selling stolen oil “to line ringleaders’ pockets, as well as to finance terrorist activities and bribe government officials”).

36. *Id.*

37. *Id.*

38. See Luft, *supra* note 14, at 42–43.

39. See *id.*; see also Iraq Pipeline Watch, *supra* note 13 (delineating each terrorist attack on oil infrastructure since the end of major combat operations in Iraq).

40. See Luft, *supra* note 14, at 42–43.

41. See Paul Sampson, *Iraq: Rivalry and Horse-Trading*, ENERGY COMPASS, Feb. 25, 2005, at 1, available at <http://lexisnexis.com> (follow “legal”; then follow “area of law”; then follow “energy”; then follow “general news and information”).

42. Luft, *supra* note 14, at 43.

43. *Id.*

The terrorist attacks on energy assets in Iraq have not been isolated to oil pipelines.⁴⁴ Terrorists have bombed pumping stations, launched mortar rounds at natural gas tanks, fired rockets into refineries, and navigated bomb-laden boats into the vital Basra terminal.⁴⁵ Electricity plants in Iraq have also been targets of terrorist mortar attacks.⁴⁶ Furthermore, numerous members of the energy industry have been killed assisting in the rebuilding effort.⁴⁷

The U.S. administration responded to these attacks. One mission of the U.S. soldiers deployed in support of Operation Iraqi Freedom has been to protect Iraq's oil infrastructure.⁴⁸ This military mission included infantry soldiers guarding pipelines,⁴⁹ the Army Corps of Engineers working on damaged pipelines,⁵⁰ and the U.S. Navy maintaining a presence in the Basra port facility.⁵¹

United States forces are not acting alone in protecting Iraqi pipelines. The Iraqi government has deployed local security guards to protect pipelines,⁵² many of whom have lost their lives.⁵³ Moreover, the Iraqi Oil Ministry has recently been

44. Iraq Pipeline Watch, *supra* note 13 (describing the various energy installations that have been attacked).

45. *Id.*

46. T. Christian Miller, *The Conflict in Iraq: To Rebuild Amid Danger*, L.A. TIMES, Feb. 21, 2004, at A4.

47. *See Iraqi Interim Government Threatened by Sabotage, Violence: Oil Exports, Electricity Disrupted*, FACTS ON FILE WORLD NEWS DIGEST, June 17, 2004, at 433A1 (noting the attack on General Electric employees after the company announced it would not pull out of Iraq); *see also* Iraq Pipeline Watch, *supra* note 13 (describing the numerous Iraqi oilmen who have been killed in the line of duty).

48. *See, e.g.*, THOMAS HAMILL & PAUL T. BROWN, ESCAPE IN IRAQ: THE THOMAS HAMILL STORY 246 (2004) (noting that Thomas Hamill, an American held hostage by Iraqi terrorists, escaped to U.S. soldiers who had been assigned to guard a crew while they repaired a pipeline damaged during the insurgency).

49. *See id.*

50. *Car Bomb Targets Iraqi National Guard*, MSNBC, Sept. 15, 2004, <http://www.msnbc.msn.com/id/5949556/>.

51. *See* George Orwel, *Iraq Stresses Pipeline and Port Security to Raise Oil Exports*, OIL DAILY, July 11, 2005, at 1, *available at* <http://lexisnexis.com> (follow "legal"; then follow "area of law"; then follow "energy"; then follow "general news and information").

52. *Car Bomb Targets Iraqi National Guard*, *supra* note 50.

53. *See* Iraq Pipeline Watch, *supra* note 13.

developing new pipeline security measures, fencing off 435 miles of the Kirkuk pipeline and deploying 1,500 Iraqi troops along its vast expanse.⁵⁴

B. The Future . . . It's Shocking

There are many other instances of terrorist groups targeting energy assets around the world.⁵⁵ The specific examples mentioned demonstrate the willingness and ability of terrorists to target energy assets, and their threats of future attacks suggest they will continue. Shortly after the attacks of September 11th, the Federal Bureau of Investigation (FBI) warned energy companies of Osama bin Laden's approval of targeting natural gas pipelines and facilities in North America if he were detained or killed.⁵⁶ This statement was not made off-handedly. Al-Qaeda's leader is well aware of the impact that targeting energy assets can have on the United States and the world.⁵⁷ Other terrorists have followed bin Laden's lead and recognized oil as "the provision line and the feeding artery of the life of the crusader nation."⁵⁸ With this in mind, terrorist websites have called on "our brothers in the battlefields to direct some of their great efforts towards the oil wells and pipelines . . ."⁵⁹ These threats clearly caught the attention of experts and legislators worldwide.⁶⁰

54. Orwel, *supra* note 51.

55. See Luft, *supra* note 14, at 43–44 (describing terrorist attacks on oil pipelines in numerous countries).

56. *War on Terrorism: Crisis at a Glance*, ATLANTA J. CONST., Nov. 27, 2001, at 7A.

57. See *Energy Security Hearing*, *supra* note 3, at 16 (statement of Gal Luft, Executive Director, IAGS) (noting that, in a video released in 2004, bin Laden stated his fighters were, "continuing . . . policy to make America bleed profusely to the point of bankruptcy").

58. *Id.* at 19.

59. *Id.* at 23. Dr. Luft also brought to the Subcommittee's attention the level of sophistication and understanding of the terrorist groups when he mentioned that a jihadist website stated, "The killing of 10 American soldiers is nothing compared to the impact of the rise in oil prices on America and the disruption that it causes in the international economy." *Id.*

60. See *infra* Part II.B.1–2.

1. *The Oil Shockwave*

Experts in the private sector and some legislators have been attempting to raise awareness of the importance of energy security.⁶¹ These experts and legislators recognize the destructive power terrorist organizations can have by targeting energy assets and are heeding the threats of future attacks.⁶²

In response to terrorist attacks and the continuing threats on energy infrastructure—specifically oil assets—the organization Securing America's Future Energy (SAFE),⁶³ in conjunction with the National Commission on Energy Policy (NCEP),⁶⁴ conducted a simulation exercise entitled Oil Shockwave in June 2005.⁶⁵ This exercise involved former top government officials including two former Directors of the Central Intelligence Agency (CIA), a former member of the Joint Chiefs of Staff, and a former Administrator of the Environmental Protection Agency (EPA).⁶⁶ The participants acted as advisors to the President in response to a series of hypothetical situations that would potentially reduce worldwide oil production.⁶⁷

61. See *Energy Security Hearing*, *supra* note 3, at 1 (statement of Rep. Ed Royce, Chairman, House Subcomm. on Int'l Terrorism and Nonproliferation) (stating that “[c]ombating this [oil terrorism] threat should be part of our complex goal of improving our [n]ation's energy security”).

62. See *Energy Security Hearing*, *supra* note 3, at 19, 25 (statement of Gal Luft, Executive Director, IAGS) (suggesting a terrorist attack on Ras Tanura, the largest offshore oil loading facility in the world, could be more economically devastating than a “dirty nuclear bomb” strike on New York City).

63. SAFE is a nonpartisan organization whose goal is to reduce United States dependence on oil and raise public awareness of the related national security issues. SAFE, The Organization, http://www.secureenergy.org/about_organization.php (last visited Jan. 27, 2007).

64. The National Commission on Energy Policy (NCEP) is a bipartisan group of energy experts committed to addressing concerns regarding oil security and the adequacy of energy supplies. SAFE, Sponsors, http://www.secureenergy.org/shockwave_sponsors.php (last visited Jan. 27, 2007).

65. See SAFE, Overview, http://www.secureenergy.org/shockwave_overview.php (last visited Jan. 27, 2007).

66. *Energy Security Hearing*, *supra* note 3, at 5–6 (statement of Robbie Diamond, President, SAFE).

67. *Id.*

The Oil Shockwave scenarios were as follows: 1) in December 2005, violence and unrest in Nigeria caused 600,000 barrels of oil per day to be taken off the market and a severe winter in the northern hemisphere increased demand to 700,000 barrels per day, 2) in January 2006, coordinated terrorist attacks on oil infrastructure in both the United States and Saudi Arabia drive the oil shortage to 3.4 million barrels per day, and 3) in June 2006, a terror campaign targeting foreign nationals in Saudi Arabia is commenced.⁶⁸

The group predicted the price of oil to skyrocket to over \$160 per barrel causing the price of gasoline to rise to \$5.74 per gallon in scenario number three.⁶⁹ The group then analyzed the economic effects of oil prices reaching \$120 per barrel within the context of the fictionalized circumstances.⁷⁰ Some of the more notable impacts were an estimated two million jobs lost in 2007 and a \$2,680 increase in annual gasoline costs to the average American household.⁷¹ Dr. Robert Gates, the former head of the CIA and the former president of Texas A&M University,⁷² participated in Oil Shockwave and stated, “[T]he scenarios portrayed were absolutely not alarmist; they’re realistic.”⁷³

68. *Id.* at 7–8.

69. *Id.* Scenario Three details the worst outcome in the exercise. *Id.* Scenario One would result in \$82 per barrel and \$3.31 per gallon of gas, and Scenario 2 would result in \$123 per barrel and a gas price of \$4.74, according to the group. *Id.*

70. *Id.* at 9.

71. *Id.*

72. *Energy Security Hearing, supra* note 3, at 6. Since writing this Comment, Dr. Gates has become the Secretary of Defense.

73. *Id.* at 7. Dr. Gates’ statement was corroborated by actual events. *See id.* Mr. Diamond explained to the Subcommittee that the group had decided on a predicted starting price of oil in December 2005 to be \$58 per barrel. *Id.* Mr. Diamond noted that a short time prior to conducting the exercise, news of al-Qaeda activity in Nigeria spurred oil prices to reach \$60 per barrel. *Id.* Furthermore, attacks on key oil installations in the Niger Delta have cut Nigeria’s oil production by approximately ten percent and have been a major catalyst of world oil prices reaching a four-month high as of Jan. 2006. *See* Lynn J. Cook, *Status of Hostages Held By Nigerian Rebels Murky*, HOUS. CHRON., Jan. 25, 2006, at A16; Segun Owen, *Fearing Military Reprisals, Nigerians Flee Delta*, HOUS. CHRON., Jan. 26, 2006, at A18. The group purported to be responsible for the attacks is the Movement for the Emancipation of the Niger Delta, an ethnic Ijaw militia in Nigeria who demanded that Royal Dutch Shell pay reparations in the amount of \$1.5 billion for years of alleged oil pollution to villages in the Delta region. *See* Owen, *supra*, at A18. It seems the designers of the Oil Shockwave are even more clairvoyant than originally

2. *The NATO Forum on Energy Security Technology*

Along with the Oil Shockwave exercise, an additional indicator of the growing importance of energy security is the NATO Forum on Energy Security Technology held in February 2006.⁷⁴ Some of the Oil Shockwave participants attended the NATO Forum along with the Deputy Commander of U.S. European Command, the deputy prime minister of the Czech Republic, and a former U.S. National Security Advisor.⁷⁵ The willingness of NATO to dedicate such a significant platform solely to energy security highlights this topic's burgeoning international recognition.⁷⁶ The suggestions made and decisions reached at this conference could indicate the direction participating organizations and nations will take regarding energy security.⁷⁷

Recent works discuss the significance and debate the appropriateness of the use of the U.S. military in the security of worldwide energy facilities.⁷⁸ This Comment will not specifically address that issue. Regardless, it seems clear that terrorist organizations recognize the severe impact the destruction of energy assets can have on any nation.⁷⁹ Arguably, the United States will not be the only nation facing the decision of using force to protect international energy assets. This Comment

thought regarding the effect disruptions in Nigerian oil production could have on oil prices.

74. NATO Science for Peace and Security, NATO Forum on Energy Security, <http://www.nato.int/science/news/2005/n050728a.htm> (last visited Jan. 27, 2007).

75. See Energy Security Forum, *supra* note 4.

76. See *Energy Security Hearing*, *supra* note 3, at 23, 25 (statement of Gal Luft, Executive Director, IAGS) (calling the Forum NATO's "largest and most important annual gathering").

77. See *id.* (explaining that "decision-makers at the ministerial level from . . . partner countries" will be in attendance with the purpose of engineering solutions to the issue of energy security).

78. See Paul J. Nyden, Editorial, *Oil, Blood, and the Future: We Are Zooming to the End Faster than We Realize, Authors Conclude*, CHARLESTON GAZETTE, Aug. 28, 2005, at 1D. See generally Michael T. Klare, *The Bush/Cheney Energy Strategy: Implications for U.S. Foreign and Military Policy*, 36 N.Y.U. J. INT'L. L. & POL. 395 (2004) (citing numerous instances of the U.S. military deploying to oil-rich regions for purposes of security).

79. See *Energy Security Hearing*, *supra* note 3, at 1, 2 (statement of Rep. Ed Royce, Chairman, H. Subcomm. on Int'l Terrorism and Nonproliferation).

suggests that without clear international guidance from the United Nations, individual nations and other multinational organizations may feel empowered to protect energy infrastructure as they see fit.

III. THE NEED FOR ENERGY SECURITY POLICY

A. *United States Energy Security Should Not Stop at the Coastline: Congress Should Model Federal Energy Security Legislation After The Maritime Transportation Security Act of 2002.*

The President recently signed the Energy Policy Act of 2005 into law.⁸⁰ The Act has already been touted as some of the most significant energy legislation of the past seventy years.⁸¹ Conspicuously lacking from the Act is any mention of energy security outside of securing nuclear energy facilities.⁸² This is the only legislation since 1992 dealing explicitly with energy policy.⁸³ That the previously mentioned terrorist incidents targeted at energy assets have taken place in this thirteen year interim period⁸⁴ makes the Act's lack of energy security provisions all the more apparent and troubling. In light of the increasing terrorist activity against non-nuclear energy assets,⁸⁵ federal legislation is desperately needed to ensure uniform energy security regardless of the type of asset.

Congress apparently recognized this terrorist threat to energy assets in the maritime context and enacted the MTSA.⁸⁶ The MTSA states in its findings, "The United States is increasingly dependent on imported energy for a substantial

80. See, e.g., Michael B. Gerrard, *Energy Policy Act of 2005 Affects Many Environmental Laws*, N.Y. L. J., Sept. 23, 2005, at 3.

81. *Id.*

82. See Energy Policy Act of 2005, 42 U.S.C. § 16041 (2006).

83. Ron Gold et al., *Energy Policy Act of 2005 Leaves US With Open Issues*, OIL & GAS J., Aug. 22, 2005, at 20.

84. See *supra* Part II.A.1-3.

85. See *Energy Security Hearing*, *supra* note 3, at 17, 19 (statement of Gal Luft, Executive Director, IAGS).

86. See Maritime Transportation Security Act of 2002, Pub. L. No. 107-295, § 101, 116 Stat. 2064 (2002) (codified as amended in scattered sections of 46 U.S.C.).

share of its energy supply, and a disruption of that share of supply would seriously harm consumers and our economy.”⁸⁷ The MTSA also states, “Ports are often very open and exposed and are susceptible to large scale acts of terrorism that could cause a large loss of life or economic disruption.”⁸⁸ The legislation’s discussion of U.S. dependence on foreign energy, and the importance of port and port facility security in such close proximity, suggests Congress was aware of the need for further protection of energy assets. The issue is to determine why federal legislation to protect energy infrastructure has not expanded beyond the realm of U.S. ports.

The MTSA lists a set of desired outcomes “in the best interests of the United States.”⁸⁹ Some of these outcomes include improved port security through “communication among law enforcement officials responsible for port security,” the formulation of “requirements for physical port security, . . . the establishment of security programs at port facilities,” and the provision of “financial assistance to help the States and the private sector [to] increase physical security of United States ports.”⁹⁰ It seems these are the type of objectives Congress would also have for energy facilities throughout the nation, but such provisions were absent from the Energy Policy Act of 2005.

Significantly, the MTSA includes the Extension of Deepwater Port Act to Natural Gas.⁹¹ The MTSA amends the Deepwater Port Act of 1974 to define a deepwater port as including natural gas facilities and not solely oil facilities.⁹² This MTSA amendment effectively extends the number of energy port facilities that are included in MTSA security requirements. Because Congress is willing to extend security legislation to

87. *Id.*

88. *Id.*

89. *Id.*

90. *Id.* It is important to note the term “facility,” as provided in the “Definitions” section of the Maritime Transportation Security Act (MTSA), includes “any structure or facility of any kind located in, on, under, or adjacent to any waters subject to the jurisdiction of the United States.” *Id.* This definition of the term “facility” has been codified under 46 U.S.C. § 70101. 46 U.S.C. § 70101 (2002).

91. See Maritime Transportation Security Act § 106.

92. See 33 U.S.C. § 1502 (2004); Gearold L. Knowles, *Liquefied Natural Gas: Regulation in a Competitive Natural Gas Market*, 24 ENERGY L.J. 293, 317 (2003).

energy facilities either “located in, on, under, or adjacent to any waters subject to the jurisdiction of the United States,”⁹³ it should be willing to extend a national energy security policy to energy infrastructure across the nation. Terror organizations have recognized all energy assets as highly lucrative targets,⁹⁴ and it is necessary to extend the level of security provided by the MTSA to energy facilities located on waterways to all energy infrastructure.

1. *Layers of Security Plans*

The MTSA requires a National Maritime Transportation Security Plan.⁹⁵ This plan calls for “efficient, coordinated, and effective action to deter and minimize damage from a transportation security incident”⁹⁶ Further, the plan requires “[a]ssignment of duties and responsibilities among Federal departments and agencies and coordination with State and local governmental agencies.”⁹⁷ This National Maritime Transportation Security Plan also calls for techniques that will deter a transportation security incident.⁹⁸ Furthermore, the Plan calls for the establishment of Coast Guard security teams and Federal Maritime Security Coordinators.⁹⁹ Among numerous other missions, these maritime security teams are to be trained and equipped to have the capability to respond to threats of maritime terrorism, react to acts of maritime terrorism, and deploy domestically or internationally as a supplemental force to already committed U.S. armed forces.¹⁰⁰

Significantly, the ultimate authority for preparing the National Maritime Transportation Security Plan is the

93. 46 U.S.C. § 70101 (2002).

94. See *Energy Security Hearing*, *supra* note 3, at 16 (statement of Gal Luft, Executive Director, IAGS) (“Striking pipelines, tankers, refineries and oil fields is easy and effective.”).

95. 46 U.S.C. § 70103(a) (2002). The maritime transportation security plans have been codified under 46 U.S.C. section 70103 since the enactment of the MTSA. *Id.*

96. § 70103(a)(2).

97. § 70103(a)(2)(A).

98. § 70103(a)(2).

99. § 70103(a)(2)(D).

100. 46 U.S.C. § 70106 (2002).

“Secretary of the department in which the Coast Guard is operating.”¹⁰¹ The MTSA effectively added a branch of the armed forces to the Department of Homeland Security for the purposes of securing ports and port facilities by placing the Coast Guard under that Department’s organizational responsibility.¹⁰²

The next levels of plans below the National Maritime Transportation Security Plan are the Area Maritime Transportation Security Plans.¹⁰³ These sets of area plans designate the specific areas secured by the National Maritime Security Plan and the types of infrastructure, special economic importance, and national security interests included in those areas.¹⁰⁴ The plans are required to be integrated with one another.¹⁰⁵

The final levels of plans covered under the National Maritime Transportation Security Plan are the Vessel and Facility Security Plans.¹⁰⁶ These plans require individual owners and operators of vessels and port facilities to prepare

101. 46 U.S.C. § 70101(5) (2002). Currently, the department in which the Coast Guard operates is the Department of Homeland Security. U.S. Coast Guard Fact File, <http://www.uscg.mil/hq/g-cp/comrel/factfile/index.htm> (follow “Overview” hyperlink) (last visited Jan. 27, 2007). Prior to the terrorist attacks of September 11, 2001, the Coast Guard was organized under the Department of Transportation. See Paul Davis, *Semper Paratus: The Coast Guard is “Always Ready” to Protect America’s Ports and Waterways*, J. COUNTERTERRORISM & HOMELAND SECURITY INT’L, Fall 2003, at 1, available at <http://www.lexisnexis.com> (follow “area of law”; then follow “Homeland Security”; then follow “general news and information”). After September 11th, Congress and the Bush Administration reorganized the Coast Guard under the Department of Homeland Security. *Maritime Security: Enhancements Made, But Implementation and Sustainability Remain Key Challenges: Hearing Before the S. Comm. on Commerce, Science, and Transp.*, 109th Cong. 1 (2005) [hereinafter *Maritime Security Hearings*] (statement of Margaret T. Wrightson, Director Homeland Security and Justice Issues), available at <http://www.gao.gov/cgi-bin/getrpt?GAO-05-448T>. The MTSA, as a result, effectively makes the Secretary of Homeland Security responsible for the National Maritime Transportation Security Plans. § 70101(5).

102. See Davis, *supra* note 101 (explaining that the Coast Guard is uniquely suited to combat terrorism given its dual nature as an armed force and a law enforcement agency).

103. 46 U.S.C. § 70103(b) (2002).

104. § 70103(b)(2)(B).

105. § 70103(b)(2)(C).

106. § 70103(c).

and submit a security plan relating to their specific property to the Secretary of Homeland Security.¹⁰⁷ These nuts-and-bolts plans require specific details of vessel and facility security including area access, security training, and periodic unannounced security drills.¹⁰⁸

This layered system of security plans has been called a “family of plans,” with the more specific individual Vessel and Facility Security Plans evolving from the larger Area Plans and ultimately the National Plan.¹⁰⁹ The practical effect of this “family of plans” is the organization of Harbor Security Committees, which consist of industry members and port shareholders who have come together to implement the security plans in their specific areas.¹¹⁰

If Congress sees fit to mandate a National Maritime Transportation Security Plan and multiple layers of security plans that fall beneath, then the requirement of a national energy security plan would also be appropriate. As discussed previously, terror organizations clearly recognize the value of attacking energy infrastructure.¹¹¹ Given the awareness that terrorists are inclined to strike U.S. energy assets and the severe economic toll energy infrastructure attacks have taken on the Iraqi economy,¹¹² federal energy legislation should be enacted. Such legislation should clearly define national energy security policy, delineate a national energy security plan, and mandate multiple layers of subordinate plans similar to the MTSA. The practical effect of national energy security policy could be similar to that of the MTSA in that it might spur the formation of energy security committees and commit industry

107. *Id.*

108. § 70103(c)(3)(C)–(E).

109. See Barry Parker, *The Progress of Port Security*, SECURITY TECH. & DESIGN, Apr. 2004, available at http://www.iwsinc.com/News/A_STD.cfm.

110. *See id.*

111. See *Energy Security Hearing*, *supra* note 3, at 1 (statement of Rep. Ed Royce, Chairman, House Subcomm. on International Terrorism and Nonproliferation) (referring to language on a jihadist website suggesting the killing of American soldiers is secondary to raising oil prices through terrorism).

112. *See id.* at 1–2; Luft, *supra* note 14, at 42–43.

members to the implementation of the national energy security provisions.

Since the attacks of September 11th, the energy industry has proactively reviewed its internal security measures and worked with governmental officials to prevent future terrorist strikes.¹¹³ Some energy executives even procured security clearances to receive classified information from the Department of Homeland Security.¹¹⁴ Additionally, the National Petrochemical and Refiners Association and the American Petroleum Institute promulgated a set of guidelines, entitled the "Security Guidance for the Petroleum Industry," currently in use at energy facilities worldwide.¹¹⁵ These security measures are positive signs the energy industry is aware of the terrorist threat to energy infrastructure and is willing to take action. Nonetheless, if the federal government felt it necessary to enact a National Maritime Transportation Security Plan¹¹⁶ as opposed to leaving it to private industry and port authorities, then it cannot be content to allow private industry to set the standard in securing U.S. energy assets. The Federal Energy Regulatory Commission (FERC) listed "[w]ork[ing] with other agencies and industry to address and improve infrastructure security" as one of its primary goals for the period of 2004 through 2008.¹¹⁷ FERC has a tremendous opportunity to act on that objective by assisting in the drafting and implementation of national energy security policy and working with other agencies in its execution. The U.S. government must not allow the initiative of private

113. See Jeff Gosmano, *Energy Industry Pleased With Security Steps Taken Since 9/11*, OIL DAILY, Sept. 10, 2003, available at <http://www.lexisnexis.com> (follow "legal"; then follow "area of law"; then follow "energy"; then follow "general news and information").

114. *Id.*

115. *Id.*

116. 46 U.S.C. § 70103 (2002).

117. Fed. Energy Regulatory Comm'n, Strategic Plan FY 2004-FY 2008, June 17, 2004, <http://www.ferc.gov/EventCalendar/Files/20040617161057-Clean FY04 - FY 08 SP 2-page-06-17-04v21.pdf> (last visited Jan. 27, 2007).

industry¹¹⁸ to stand in for its responsibility to ensure the security of energy infrastructure in the United States.

2. *Regulating Security*

Another practical effect of the MTSA has been the regulations promulgated to enforce its provisions. On January 1, 2004, the Coast Guard implemented new regulations for seafaring vessels, offshore oil and gas platforms, and port facilities.¹¹⁹

The Coast Guard regulations are extensive and detailed. Port facilities are required to have Facility Security Officers (FSO) to assist in the development of their assigned facility's Facility Security Plan.¹²⁰ FSOs must be aware of current security threats, laws, and codes relevant to their facility.¹²¹ Additionally, FSOs must ensure their facility conducts a security drill every three months.¹²² Port facilities also undergo Facility Security Assessments in which the facility owner or operator is required to provide information regarding the facility to assure the FSO that the facility is in compliance with the overall Facility Security Plan.¹²³ This level of detailed security at ports and port facilities should be implemented in regard to all energy infrastructure with federal regulations similar to that of the Coast Guard regulations.

The difficulty with promulgating security regulations for all energy infrastructure is the cost related to their implementation. Port security managers are faced with the burden of strengthening perimeter fencing and installing alarm systems, among many other extensive security measures.¹²⁴ The energy industry may argue the economic drain of complying

118. See Gosmano, *supra* note 113 (noting the statement of the Director of the American Petroleum Institute: "Overall, what we're doing is to really try to develop a close partnership with the Department of Homeland Security").

119. *Id.*

120. 33 C.F.R. § 105.400(a) (2005).

121. 33 C.F.R. § 105.205(b)(2) (2005) (amended by 72 Fed. Reg. 3492-01 (Jan. 25, 2007) (to be codified 33 C.F.R. § 105.205(b)(2) (adding another requirement)).

122. 33 C.F.R. § 105.220(b)(1) (2005).

123. See 33 C.F.R. § 105.305 (2005).

124. See Parker, *supra* note 109.

with national energy security regulations would outweigh the benefit of such compliance.¹²⁵ The maritime industry likely made a similar argument—since 2002, the federal government has spent \$560 million in grants to ports and other entities to fund programs meant to reduce the vulnerability of ports and port facilities to maritime terrorism.¹²⁶ These federal funds have gone to port authorities, vessel operators, and private companies for projects such as fence and gate enhancements, surveillance equipment, and patrol vehicles.¹²⁷ The Coast Guard estimated the cost of enacting the various security provisions of the MTSA to be \$1.5 billion for the initial year and \$7.3 billion over ten years.¹²⁸ If the federal government is willing to provide grants and subsidize the security of port and port facilities, the government should show equal willingness in supporting the energy industry's compliance with federal energy security regulations.

The enactment of the MTSA suggests the federal government is taking the threat of maritime terrorism seriously.¹²⁹ The mass of regulations and provisions of the MTSA¹³⁰ and the extensive requirements necessary to implement Facility Security Plans¹³¹ demonstrate the high regard the federal government gives to maritime security. The elaborate network of maritime security plans incorporated in the

125. See Gosmano, *supra* note 113 (stating that certain energy companies think guarding pipelines is far too costly of an endeavor).

126. *Maritime Security Hearings*, *supra* note 101, at 22 (noting the amount of funding the federal government provided under the Port Security Grant Program and the Urban Area Security Initiative). These programs were designed to help reduce the likelihood of a terrorist attack on ports by providing funds for increased security. *Id.* The grant programs have been very successful, and the requests for funds from the maritime industry have surpassed their availability. *Id.*

127. *Id.*

128. *Id.* at 21–22.

129. See *id.*, at 1 (noting that three years after the attacks of September 11th, maritime security is still a major national issue, and Congress and the Bush Administration have gone to great lengths to enhance port security).

130. See Parker, *supra* note 109 (“The MTSA’s voluminous regulations do not make for easy reading.”).

131. See *id.* (“The USCG guidelines require each [Facility Security] plan to discuss personnel identification, vehicle access control, perimeter fencing, alarm and communication systems and training.”).

MTSA, the reorganization of the Coast Guard under the Department of Homeland Security, and the money the federal government doled out to ensure compliance with MTSA provisions illustrate the recognition that acts of maritime terrorism could wreak serious economic havoc on the United States.¹³² Because the terrorist attacks of September 11th did not involve U.S. seaports, the estimated costs of a maritime terrorist attack are largely theoretical;¹³³ however, the potential costs are clearly compelling enough for the federal government to enact the MTSA. The evidence of severe economic repercussions on the U.S. economy predicted by the Oil Shockwave exercise is also largely theoretical,¹³⁴ but it should be equally as compelling as the federal government's basis for enacting the MTSA to prompt the federal government to enact similar legislation regarding energy security.

3. Federal Energy Security Guards

Similar to the MTSA calling for Coast Guard Maritime Security teams to defend port and port facilities from maritime terrorism, the Department of Energy (DOE) suggests elite forces, modeled after U.S. Special Forces, be employed to protect nuclear energy sites from terrorism.¹³⁵ Though this proposed development of an elite force was suggested specifically to secure

132. See *Maritime Security Hearings*, *supra* note 101, at 5 (“[T]he Brookings Institution has estimated that costs associated with U.S. seaport closures resulting from a detonated weapon of mass destruction could amount to \$1 trillion.”). Furthermore, another consulting firm to the government studied the possible costs of finding an undetonated weapon of mass destruction at a U.S. seaport and estimated the costs of a twelve-day port closure at \$58 billion. *Id.*

133. See *id.*

134. See *Energy Security Hearing*, *supra* note 3, at 4–5 (statement of Robbie Diamond, President, SAFE).

135. *DOE Needs Prompt Action to Meet its New DBT*, NUCLEAR NEWS, Sept. 2005, at 27 [hereinafter *New DBT*], available at <http://www.gao.gov/new.items/d05611.pdf> (noting that the current Department of Energy (DOE) training of “contractor-operated protective forces will not be adequate to defeat the much larger terrorist threat contained in the October 2004 [design basis threat]”). This DOE elite force would eventually be transformed “from a contractor-operated force into a federal force.” *Id.* However, the proposal for the development of this elite force is in the “conceptual phase” and it is unlikely this security force will be commissioned in the foreseeable future. *Id.*

nuclear energy facilities,¹³⁶ it is significant that the DOE is contemplating the use of security forces specifically trained and equipped for the protection of energy infrastructure. This DOE suggestion may demonstrate a willingness to mandate the training and equipping of forces specifically organized to secure energy infrastructure.

The grave evidence of the Oil Shockwave exercise suggested an attack on a particular oil facility could have a more severe economic effect than a nuclear terrorist strike.¹³⁷ It may, therefore, be an economically responsible endeavor to enact federal legislation mandating the development of a security force to secure non-nuclear assets and energy infrastructure not located on waterways. Furthermore, if Congress is willing to spend \$560 million over three years and to contemplate expenditures of up to \$7.3 billion over the coming decade on port security,¹³⁸ then in light of the economically catastrophic Oil Shockwave assertions, federal legislation for energy security forces should be forthcoming.

Moreover, it is currently U.S. policy that American soldiers safeguard energy infrastructure in Iraq,¹³⁹ so a lack of a federally mandated energy infrastructure security force on U.S. soil seems incongruous. Because U.S. Special Forces' soldiers were in Colombia to secure a pipeline and the DOE suggested the development of an elite unit for the security of nuclear energy assets, it appears the U.S. government already deems security of energy infrastructure an undertaking worthy of a specialized security force. Again, there exists the argument that the U.S. military should not be used to secure energy assets;¹⁴⁰ however, the MTSA federally mandated a branch of the armed

136. *See id.*

137. *Energy Security Hearing, supra* note 3, at 25 (statement of Gal Luft, Executive Director, IAGS).

138. *Maritime Security Hearings, supra* note 101, at 22.

139. *See* Gosmano, *supra* note 113 (suggesting the United States is considering the policy of placing full time security on Iraqi pipelines for the deterrence of future attacks).

140. *See, e.g.,* Klare, *supra* note 78, at 402–03, 423 (suggesting the current use of U.S. forces in oil-rich nations will lead to bloodshed and further anti-Americanism).

forces—the U.S. Coast Guard—to secure ports and port facilities, which include energy assets.¹⁴¹

Development of a federal energy security force may be a costly proposition.¹⁴² Nevertheless, it seems the building block ideas and organizational framework already exist, as demonstrated by actions of the Coast Guard and DOE. Therefore, unified federal legislation setting forth U.S. energy security policy should call for energy security teams who are trained and equipped to respond to acts of energy terrorism.

In sum, the Energy Policy Act of 2005 failed to set forth significant national policy in regard to security of non-nuclear energy infrastructure.¹⁴³ The use of U.S. forces abroad and domestically in securing energy assets demonstrates the federal government's interest in the protection of energy infrastructure. The enactment of the extensive provisions of the MTSA to secure energy facilities on waterways further demonstrates this interest.¹⁴⁴ The desire of terrorist organizations to attack energy assets and the extensive economic damage that such strikes could cause are ample evidence of the need for federal energy security policy.

The MTSA details a comprehensive policy for maritime security from which regulations have been promulgated to ensure its execution.¹⁴⁵ A national energy security policy should be modeled after the MTSA and executed in the same manner. The multiple security plans of the MTSA¹⁴⁶ could be directly applied to energy security. A responsible Secretary could develop a national energy security plan and require the implementation of various levels of subordinate plans. This would be an excellent way of delegating responsibility of individual energy facility security to operators and owners—as in the MTSA.¹⁴⁷ An energy

141. See 46 U.S.C. § 70103 (2002) (requiring the establishment of maritime security teams).

142. See *New DBT*, *supra* note 135, at 27 (noting the “significant commitment of resources” required for elite forces).

143. See 42 U.S.C. § 16041 (2005).

144. See *supra* text accompanying notes 90–92.

145. See Gosmano, *supra* note 113.

146. See 46 U.S.C. § 70103 (2004).

147. See 33 C.F.R. § 105.305 (2005).

security force could be developed or an existing security force could be reorganized to respond to acts of energy terrorism just as the Coast Guard has been under the MTSA.

A system of federal grants could help the energy industry comply with energy security regulations, similar to the Port Security Grant Program.¹⁴⁸

The MTSA initiated the trend of securing energy infrastructure in the United States, but its regulations do not reach beyond the nation's waterways.¹⁴⁹ Federal energy security legislation is needed to continue where the MTSA ceases to be effective. If federal policy is needed in response to the threat of maritime terrorism, then it is also needed for energy terrorism. Federal energy security policy should be foremost in the minds of the members of Congress, and the MTSA should serve as a model for this much needed legislation.

B. The International Need for Effective Energy Security: The United Nations' Next Big Initiative?

Energy terrorism is not a threat the United States faces alone. The examples of energy terrorism in Iraq, Colombia, and Russia demonstrate the effect this issue has on the international community.¹⁵⁰ International energy trade is negatively affected,¹⁵¹ and therefore, it has become necessary to develop methods of dealing with energy terrorism on a worldwide scale. Members of the energy industry recognize this need for security of energy assets and have taken steps to work with international governing bodies in developing energy security systems.¹⁵² This

148. See *Maritime Security Hearings*, *supra* note 101, at 22.

149. See *supra* note 90 and accompanying text.

150. See *supra* Part II.A.1-3.

151. See John J. Fialka & Russell Gold, *Fear of Terrorism: Plans for Liquefied-Gas Terminals Put Off*, CHARLESTON GAZETTE, May 15, 2004, at 7C (describing coastal towns in Mexico and California voting down efforts by Marathon Oil Corp. and Calpine Corp. to build liquefied natural gas terminals out of fear of possible terrorist strikes on the assets).

152. See *European Platform*, *supra* note 6 (describing the efforts of the European Platform of Energy Infrastructure Security). The European Platform of Energy Infrastructure Security recognized the importance of developing standards of energy security for the energy industry in Europe as a whole. *Id.* The Platform suggested the European Commission as the proper body for setting the standards for energy security

effort is a positive sign, much in line with the U.S. energy industry taking initiative after the September 11th attacks to ensure its individual security.¹⁵³ Nonetheless, regional energy infrastructure security systems are not sufficient to guarantee the protection of energy assets on a global scale. The energy industry worldwide needs to be assured that a uniform energy infrastructure security policy exists, as does the United States.

The United Nations is a uniquely suited body to develop international guidelines for energy asset security. The United Nations is currently made up of 192 member nations,¹⁵⁴ many of which suffer the effects of energy terrorism.¹⁵⁵ Furthermore, the cross border nature of many energy assets¹⁵⁶ necessitates a body capable of developing internationally applicable energy asset security policy.

1. Resolution 1373 and the Counter-Terrorism Committee

The United Nations responded quickly to the terror attacks of September 11th by adopting Resolution 1373.¹⁵⁷ The Resolution is a call to member states to refrain from supporting terrorism or providing a safe haven to those who do.¹⁵⁸ The Resolution also established the Counter-Terrorism Committee (CTC),¹⁵⁹ a largely powerless organization lacking the capacity

systems, allowing individual nations to ensure their own compliance. *Id.*

153. See Gosmano, *supra* note 113.

154. United Nations, List of Member States, <http://www.un.org/Overview/unmember.html> (last visited Jan. 27, 2007). Since writing this paper, the number has grown to 193 nations. *Id.*

155. All the nations identified in Part II of this Comment as having suffered from acts of energy terrorism are members of the United Nations. See *id.*; see also *supra* Part II.A.1–3.

156. See *European Platform*, *supra* note 6 (describing the cross-border nature of Europe's meshed energy grid); Luft, *supra* note 14, at 43–44 (describing the Baku-Tblisi-Ceyhan pipeline as spanning the borders of Azerbaijan, Georgia, and Turkey).

157. S.C. Res. 1373, U.N. Doc. S/RES/1373 (Sept. 28, 2001); see also Eric Rosand, *Security Council Resolution 1373, the Counter-Terrorism Committee, and the Fight Against Terrorism*, 97 AM. J. INT'L L. 333 (2003) (calling Resolution 1373 "the cornerstone of the United Nations' counterterrorism effort").

158. S.C. Res. 1373, *supra* note 157, ¶2.

159. See *id.* ¶6; Rosand, *supra* note 157, at 333. The Counter-Terrorism Committee (CTC) is a committee consisting of all the members of the U.N. Security Council. Rosand, *supra* note 157, at 334. The CTC requires all U.N. member states to report the measures

to respond to terrorism or to sanction terror-sponsoring states.¹⁶⁰ The Resolution did not, however, define the term “terrorism.”¹⁶¹ The United Nations will not be effective in the fight against energy terrorism if it cannot clearly define the term. Nonetheless, the CTC may be the organization best suited to begin discussions of establishing an international framework for energy infrastructure security. The CTC has been in dialogue with all U.N. member nations and has received updates detailing their individual approaches to instating the provisions of Resolution 1373.¹⁶² If member nations have been willing to provide detailed plans for combating terrorism, even without a definition for the word,¹⁶³ it seems those nations would also be willing to provide suggestions for a system of securing energy infrastructure.

2. *The IAEA and International Nuclear Energy Security*

Similar to the U.S. government, the international community recognizes the importance of nuclear energy infrastructure security.¹⁶⁴ The IAEA, organized under the United Nations,¹⁶⁵ recognized, particularly since the terrorist

they have taken to implement Resolution 1373. *Id.* The CTC focused on fostering dialogue between the Security Council and U.N. member nations regarding the best methods to globally defend against terrorism. *See id.* at 335.

160. *See* Rosand, *supra* note 157, at 337 (describing the mission of the CTC). The author suggests the CTC is designed to bolster the infrastructure required to combat terrorism. *Id.*

161. *See id.* at 334 (discussing the difficulty of defining terrorism when dealing with a body comprised of multiple nations, recalling the old axiom, “one man’s terrorist is another man’s freedom fighter”).

162. *Id.* at 335.

163. *See id.* at 337 (discussing the rounds of reports submitted by member nations).

164. *See* INT’L ATOMIC ENERGY AGENCY (IAEA), ANNUAL REPORT 54 (2004) [hereinafter ANNUAL REPORT], available at http://www.iaea.org/Publications/Reports/Anrep2004/anrep2004_full.pdf (stating the IAEA seeks to increase international awareness of the need to physically protect nuclear energy sources).

165. U.N. System Organizations, <http://orgs.unsystemceb.org> (last visited Jan. 27, 2007); *see* The “Atoms for Peace” Agency, <http://www.iaea.org/About/index.html> (last visited Jan. 27, 2007) (stating the IAEA is the international organization that works with its member nations “to promote safe, secure and peaceful nuclear technologies”).

attacks of September 11th,¹⁶⁶ the importance of the physical security of nuclear energy facilities.¹⁶⁷ The IAEA developed a system of Integrated Nuclear Security Support Plans that provide member nations a clearly defined framework for strengthening nuclear security.¹⁶⁸ To further assist nations in implementing their plans for nuclear security, the IAEA developed various service organizations that will review and assess member nations' current nuclear physical security systems.¹⁶⁹

Moreover, the IAEA drafted the Code of Conduct on the Safety and Security of Radioactive Sources.¹⁷⁰ The Code states that IAEA member states should have legislation detailing the safety and security requirements of radioactive sources.¹⁷¹ This Code also requires the nuclear energy regulatory bodies of member nations to establish guidelines for the security of radioactive material and to have the authority to demand

166. See MATTHEW BUNN & GEORGE BUNN, IAEA, REDUCING THE THREAT OF NUCLEAR THEFT AND SABOTAGE 1 (2001), http://www.iaea.org/NewsCenter/Features/Nuclear_Terrorism/bunn02.pdf (last visited Jan. 27, 2007) [hereinafter NUCLEAR THEFT AND SABOTAGE] (quoting IAEA Director General Mohamed ElBaradei, "The tragic terrorist attacks on the United States were a wake up call to us all. . . . We have to increase our efforts on all fronts . . . from nuclear installation design to withstand attacks to improving how we respond to nuclear emergencies.").

167. Press Release, IAEA, IAEA Board of Governors Approves IAEA Action Plan to Combat Nuclear Terrorism (May 2004), available at <http://www.iaea.org/NewsCenter/PressReleases/2002/prn0204.shtml> ("[T]he Board has recognized that the first line of defense against nuclear terrorism is the strong physical protection of nuclear facilities and materials."); see also NUCLEAR THEFT AND SABOTAGE, *supra* note 166, at 1 ("[N]uclear facilities and materials—along with a wide range of other especially hazardous facilities and materials—must be protected from mass-consequence sabotage. Securing these materials and facilities must be a top priority on the international agenda . . .").

168. IAEA, *Nuclear Security—Measures to Protect Against Nuclear Terrorism*, at 5, IAEA Doc. GOV/2004/50-GC(48)/6 (Aug. 11, 2004) [hereinafter *Nuclear Terrorism*].

169. See ANNUAL REPORT, *supra* note 164, at 54 (describing the work of the International Nuclear Security Advisory Service (INSServ) and the International Physical Protection Advisory Service (IPPAS)).

170. IAEA, *Code of Conduct on the Safety and Security of Radioactive Sources*, IAEA Doc. IAEA/CODECO/2004 (Jan. 2004).

171. *Id.* ¶18.

nuclear facility security plans from facility owners and operators.¹⁷²

The great lengths to which the IAEA has gone to ensure nuclear energy security demonstrates the Agency's commitment to the issue. The IAEA has been particularly focused due to the evidence that terror organizations have sought to obtain nuclear material for the purposes of terror strikes.¹⁷³ The terrorist attacks on non-nuclear energy assets worldwide and the evidence that, in some instances, attacks on particular non-nuclear energy infrastructure could have a more catastrophic effect than a nuclear strike¹⁷⁴ suggest that the United Nations should take the security of non-nuclear energy assets as seriously as the security of nuclear material. A U.N. agency should take the initiative in developing energy infrastructure security plans for member states similar to the Integrated Nuclear Security Support Plans developed by the IAEA.¹⁷⁵ Additionally, member nations could benefit from the expertise of international services to assess and review the physical security of energy infrastructure, similar to the IAEA's International Nuclear Security Advisory Service and International Physical Protection Advisory Service.¹⁷⁶ Moreover, given the international nature of energy infrastructure,¹⁷⁷ it is particularly necessary for the United Nations to develop a set of uniform guidelines dealing with the security of energy assets.

Despite the need for uniform international energy infrastructure security guidelines and the continued terrorist targeting of energy assets worldwide, there is not an agency specifically regulating energy policy among member states of the United Nations.¹⁷⁸ The United Nations recognized, through the

172. *Id.* ¶20.

173. See NUCLEAR THEFT AND SABOTAGE, *supra* note 166, at 1 (referring to evidence of al-Qaeda's efforts to purchase stolen nuclear material from the former Soviet Union). The author also notes that "Osama bin Laden has called the acquisition of weapons of mass destruction a 'religious duty' . . ." *Id.*

174. See *Energy Security Hearing*, *supra* note 3, at 17 (statement of Gal Luft, Executive Director, IAGS) (referring to a terrorist strike on Ras Tanura).

175. See *Nuclear Terrorism*, *supra* note 168, at 5.

176. See ANNUAL REPORT, *supra* note 164, at 54.

177. See S.C. Res. 1373, *supra* note 157.

178. U.N. System Organizations, <http://orgs.unsystemceb.org> (last visited Jan. 27,

IAEA, the need for nuclear energy security; however, it must heed the continuous terrorist strikes against non-nuclear energy assets and develop an international policy of energy infrastructure security.

3. *The IMO and International Maritime Security*

Much like the United States, the international community recognized the necessity of codifying maritime security policy,¹⁷⁹ but failed to act similarly in regard to energy infrastructure security. The IMO established the International Ship and Port Facility Security Code (ISPS Code)¹⁸⁰ with the express intent of establishing a uniform international maritime security system:

The objectives of this Code are to establish an international framework involving co-operation between Contracting Governments, Government agencies, local administrations and the shipping and port industries to detect/assess security threats and take preventive measures against security incidents affecting ships or port facilities used in international trade; to establish the respective roles and responsibilities of all these parties concerned, at the national and international level, for ensuring maritime security; to ensure the early and efficient collation and exchange of security-related information; to provide a methodology for security assessments so as to have in place plans and procedures to react to changing security levels; and to ensure the confidence that adequate and

2007) (listing the specialized agencies organized under the United Nations).

179. See Int'l Maritime Org. (IMO), *International Ship and Port Facility Security Code*, (Dec. 12, 2002), available at http://www.turkloydu.org/EN/SEA/ISPS_Code_en.pdf [hereinafter *ISPS Code*].

180. Sean D. Murphy, ed., *Contemporary Practice of the United States Relating to International Law: International Oceans, Environment, Health, and Aviation Law: Establishment of U.S. Antiterrorism Maritime Transportation System*, 98 AM. J. INT'L L. 588, 589 (2004). The IMO Assembly, in November 2001, began reviewing internal documents to determine if they were in need of updating due to the threat of maritime terrorism. *Id.* The ISPS Code is the product of that internal review and was adopted in December 2002 at the Conference of Contracting Governments to the International Convention for the Safety of Life at Sea. See *ISPS Code*, *supra* note 179, at Foreword.

proportionate maritime security measures are in place.¹⁸¹

The ISPS Code and MTSA closely parallel one another and were drafted to achieve largely the same goal of establishing a cohesive policy of maritime security.¹⁸²

Similar to the MTSA, the ISPS Code requires a series of security plans for ports and port facilities.¹⁸³ Unlike the MTSA's requirement for a National Maritime Transportation Security Plan,¹⁸⁴ however, the ISPS Code does not require an international maritime transportation security plan—it focuses on plans for individual ships and port facilities.¹⁸⁵ Nevertheless, the ISPS Code requires member nations' active involvement in the assessment and testing of the ship and port facility security plans.¹⁸⁶ Also, much like the MTSA, the ISPS Code requires ship and port facility officers to be active in enhancing and testing the security of their assigned assets.¹⁸⁷

The IMO enforces the ISPS Code by publishing a list of ports that maintain a proper Port Facility Security Plan and a list of vessels that do not have the certification required under the Code.¹⁸⁸ If a particular vessel does not have the appropriate certification or embarked from a port lacking a proper security plan, then member nations can deny that vessel port entry.¹⁸⁹ Effectively, the IMO encourages even nonmember nations to comply with the provisions of the ISPS Code by potentially

181. *ISPS Code*, *supra* note 179, at Foreword.

182. *See* Parker, *supra* note 109; Murphy, *supra* note 180, at 589 (stating the IMO was pursuing the issue of maritime security while the MTSA was being drafted and enacted). Furthermore, the article states, "Like the MTSA, the ISPS Code takes the approach that ensuring the security of vessels and port facilities is basically a risk management activity that entails, after assessing the risks for individual ports and vessels, identifying and undertaking appropriate security measures." Murphy, *supra*, at 589.

183. *See ISPS Code*, *supra* note 179, §§ 9, 15 (describing the Ship Security Plans and the Port Facility Security Plans).

184. *See* 46 U.S.C. § 70103 (2002).

185. *See ISPS Code*, *supra* note 179, §§ 9, 15.

186. *See id.* §§ 4.3, 4.4.

187. *See id.* §§ 12–13, 17–18.

188. Murphy, *supra* note 180, at 589.

189. *Id.*

denying them the ability to conduct certain maritime transactions if they do not obey the Code.

Energy asset security is equally as important as maritime security to warrant its own international guidelines. The United Nations should promulgate international energy infrastructure security legislation similar to the ISPS Code. A single unifying body must require member nations to develop basic energy facility security plans. Terrorist organizations have demonstrated their willingness and ability to strike energy infrastructure around the world, and the energy industry should be assured that its assets are being adequately protected. An international energy infrastructure security framework requiring the establishment and assessment of individual energy facility security plans may help to systematically prevent acts of energy terrorism throughout member nations by insuring a minimum security standard for all energy assets.

Additionally, a system of enforcement similar to the ISPS Code should be established. This system would be particularly effective in the energy field given its international nature. Nations that refused to comply with the international energy asset security provisions would be faced with the possibility of losing crucial foreign energy contracts. If the energy industry was provided lists of recalcitrant nations, as the case in the enforcement of the ISPS Code,¹⁹⁰ then it may be more wary of the nations with which it does business.

The United Nations, through the IMO, recognized the need for further measures of maritime security after the September 11th attacks.¹⁹¹ The response was the establishment of a unified maritime security code applicable to member nations.¹⁹² The terror attacks worldwide on energy infrastructure demonstrated a similar need for cohesive international energy asset security policy, but the United Nations has not responded as they did to the threat of maritime terrorism. The IMO developed a workable code for insuring the security of ports and port facilities of member nations. The United Nations should use the ISPS Code

190. See Murphy, *supra* note 180, at 589.

191. See *ISPS Code*, *supra* note 179, at Preamble.

192. *Id.*

as model legislation in developing international energy infrastructure security policy.

4. *NATO Initiative in International Energy Security*

Despite the need for a unified international energy infrastructure security policy, it is highly unlikely the United Nations will be the organization where the policy originates. Though it may be uniquely qualified to identify the problem of international energy terrorism and develop a framework for ensuring the security of energy assets at least located in member nations, the United Nations will likely remain immobile in such an effort given its response to terrorism in general. The United Nations reacted quickly to the terrorist strikes on September 11th by enacting Resolution 1373 and creating the CTC.¹⁹³ In spite of this quick reaction, the Resolution failed to even define the term “terrorism,” and the toothless CTC is unable to respond directly to acts of terrorism.¹⁹⁴ The IAEA and the IMO, two major specialized agencies of the United Nations, recognized the specter of terrorism in their respective fields and responded with international security legislation.¹⁹⁵ Nevertheless, the United Nations has not established international energy infrastructure security policy.

The United Nations’ failure to respond to the rampant acts of energy terrorism worldwide has compelled nations to act on their own behalf in regards to energy infrastructure security.¹⁹⁶ Some critics expressed displeasure over the projection of power to ensure the security of energy sources.¹⁹⁷ Nonetheless, without international guidelines insuring the security of energy assets, at least within U.N. member nations, it may be necessary for a

193. See Rosand, *supra* note 157, at 333.

194. *Id.* at 334, 337.

195. See *supra* Part III.B.2–3.

196. See *supra* Part II.A.1–3.

197. See Klare, *supra* note 78, at 423 (“But whether this merging of energy policy with military policy actually will succeed in ensuring United States access to ever-increasing supplies of imported petroleum remains to be seen: As suggested above, the deployment of U.S. military forces in areas with a history of anti-American or anticolonial outbursts is likely to fuel additional violence, not quell it; and as the level of violence rises, oil production is likely to fall.”).

nation to intervene militarily to protect vital energy infrastructure. An international energy infrastructure security framework preventing noncompliant nations from engaging in the energy trade, like the ISPS Code,¹⁹⁸ may supersede the possible need for military intervention.

Additionally, if the United Nations does not take the lead in establishing international energy asset security policy, this may grow from a regulatory issue to a geopolitical and military issue. As discussed, the IAEA and the IMO have taken nuclear energy security and maritime security, respectively, and established frameworks with which member nations are obliged to comply. If the United Nations allows international energy infrastructure security to remain unregulated, then other organizations may take the initiative on the issue.

The NATO Forum on Energy Security Technology demonstrates international willingness to confront the issue of energy asset security.¹⁹⁹ NATO involvement in energy infrastructure security suggests this issue has already become one of military significance.²⁰⁰ The fall of the Soviet Union caused NATO to refocus its efforts on crisis management in its sphere of influence.²⁰¹ NATO convening in such a significant manner suggests the organization already views energy asset security as a crisis that may threaten the overall security of the region.²⁰² The Supreme Allied Commander in Europe and the

198. See Murphy, *supra* note 180, at 589.

199. See *Energy Security Hearing*, *supra* note 3, at 16 (statement of Gal Luft, Executive Director, IAGS).

200. See Davis L. Brown, *European Collective Security in the Next Millennium*, 42 A.F. L. REV. 201, 203–04 (1997) (describing the original mission of NATO as demonstrating “a common front against the threat of Soviet aggression and expansion into Western Europe”).

201. See *id.* at 203 (“We will put the finishing touches on a reformed command structure to improve our capability to carry out NATO’s new mission of crisis management . . .”).

202. See *Energy Security Hearing*, *supra* note 3, at 25 (statement of Gal Luft, Executive Director, IAGS) (calling the Forum NATO’s “largest and most important annual gathering”); see also North Atlantic Treaty art. 4, Apr. 4, 1949, 63 Stat. 2241, 34 U.N.T.S. 243, available at <http://www.nato.int/docu/basicxt/treaty.htm> (“The Parties will consult together whenever, in the opinion of any of them, the territorial integrity, political independence or security of any of the Parties is threatened.”).

Commander of the United States European Command, General James L. Jones, in reference to the NATO Forum, stated:

Today's global energy systems were not built with security in mind and are more vulnerable than ever before. The new and lethal challenges of the 21st Century make them attractive targets. The international community must work together to protect these systems because energy security is key to regional security.

The disruption of critical energy infrastructure has the potential to impact us militarily, politically, and socially. As we have all witnessed during the aftermath of Hurricane Katrina, a disaster in one location affects us all. We must work together to protect critical infrastructure throughout the world.²⁰³

It seems NATO has identified energy infrastructure security as an issue requiring international attention. General Jones's statement suggests military officials recognize energy security as a geopolitical and military issue. The United Nations must assert itself quickly if it is going to categorize energy infrastructure security as a regulatory issue that, similar to nuclear energy security and maritime security, can be dealt with through the establishment of a structured international legal framework.

IV. CONCLUSION

Terrorist organizations have targeted energy infrastructure worldwide and made it clear they intend to continue similar strikes. The war in Iraq and the recent hurricanes in the Gulf of Mexico remind the world of the consequences of an energy shortage and draw attention to the issue of energy asset security.²⁰⁴ The United States enacted the MTSA to protect its ports from maritime terrorism but has not enacted similar legislation to safeguard energy infrastructure from acts of terrorism. The United States is in need of cohesive federal

203. Interview with General James L. Jones, NATO Supreme Allied Commander, and Commander of the United States European Command, <http://www.energy-security.org> (on file with author).

204. See, e.g., *Post-Rita Gas Prices*, *supra* note 2, at 18.

energy infrastructure security legislation providing guidelines to the energy industry and requiring a national energy security plan. The MTSA set the groundwork for security legislation and can serve as a model for Congress in enacting federal energy security policy.

The United Nations must take the lead internationally in establishing a framework for insuring the security of energy infrastructure among member nations. If the United Nations deals with the issue of energy infrastructure security as the IAEA and IMO dealt with nuclear energy security and maritime security respectively, it must develop a clear standard of security for energy assets applicable to member nations. The responsibility of enacting international energy infrastructure security policy and monitoring its implementation should not be abdicated to regional organizations. The United Nations must initiate this effort quickly if energy security is ever to be viewed as a regulatory issue; otherwise, various political and military bodies may develop their own methods of securing energy infrastructure.

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