Bringing the State Back In: Energy and National Security in Contemporary International Relations

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Abstract

This paper attempts to discuss the resurgence of the state as an important actor in dealing with energy crisis. The shortfall of oil supply and the steady increase of oil consumption in the past few years – which resulted in sharp increase of oil prices – have rendered the state responsible for formulating and implementing energy policies to ensure national security. The discussion will be divided into three main sections. The first section will analyze the resurgence of states as prime actor in international relations. After being sidelined for sometime (due to the transformation of international issues from traditional strategic-military concern into economic and humanitarian concern), the state regained currency in the wake of terrorist and energy threats. The second section will discuss the current energy security problem and how it affects nation-states. The final section will analyze U.S. response to current energy crisis. Attention will be put on how U.S. government produce and implement energy policies to ensure its national security.

Key Words: ***realism, energy security, U.S. energy policy***

INTRODUCTION

In the past two decades or so, Realism (the main emphasis of which is on the gravity of nation-states as the main, if not the only, legitimate actors in international relations) has been enduring a draw back. The rise of trans-national corporations (TNCs), international non-governmental organizations (INGOs), transnational agencies (TNAs), and transnational individuals (TNIs) – whose activities had brought new impetus to the study of international relations – has generated a new conviction that non-state actors must be considered as important actors in international relations. No longer limiting their attention to nation-states, scholars began to realize that in the era of globalization non-state actors began to exert their influences in the international arena.[1]

The activities of TNCs in cross-border investments and transactions since the early 1970s have brought nations much closer forming what Kenichi Ohmae called the "borderless world".[2] In the past decades we also witness the growing role of INGOs in spreading global morality (democracy, the protection of human rights, justice, equality, fairness and so forth). In situation where the state could no longer hold responsibility to safeguard these values, INGOs are increasingly

expected to serve as "moral entrepreneurs" whose main duty is to inject global morality.[3]

In the post-Cold War era, internal conflicts which created serious crimes against humanity such as genocide in former Yugoslavia and Rwanda had alarmed scholars of the role of militias, paramilitary groups and mafias in instigating internal conflicts and in perpetrating large scale physical violence. Although solution for internal conflicts requires commitment from nation-states to serve as peace keepers and/or mediators, conflict specialists began to turn to non-state actors in peace making and peace building activities.[4] In recent years, the threat of terrorism and militant Islamic extremism which raise security concern across the globe has brought transnational terrorist networks and transnational individuals such as Osama bin Laden, Hambali, Omar Farouq, Abu Muzab al Zarqawi and so on to the center stage. Many believe that Al Qaeda and its splinter groups throughout the world are responsible in various bomb attacks in the US, Europe, and Southeast Asia.[5]

The demise of Realism has also much to do with the new trends in international relations where traditional security issues (whose main concern is state security) have been superseded by non-traditional security issues (whose attention is on human security). As Buzan, Weaver and de Wilde of the Copenhagen School pointed out, the extension of security concept to include issues beyond its traditional concern has generated demand for more inclusion of non-state actors in the study of international relations.[6]

However, energy crisis in the past few years seemed to have turned the table in favor of Realism. The quadrupling of oil prices within the period of four years has made commentators and policy makers realize the importance of effective energy policy to downsize energy consumption and to ensure sufficient amount of national energy reserve. In his book, *Energy and World Politics* (1978), Mason Willrich argues that there are at least three major components of energy policies to ensure energy security. First, "rationing" which refers to the attempts to allocate available supplies and limit consumption. A country adopts this type of policy on the ground that reductions in consumption will diminish the magnitude of many energy supply problems and extend the time for solving them. Second, "stockpiling" which is aimed at reducing an importing country's vulnerability to a supply interruption by providing a cushion against its effect. In this type of policy, a country may set the sufficient amount of national energy reserve in order to ensure security and to put a hedge against abnormal price fluctuations. Third, "diversification" which denotes attempts to ensure the continuity of energy supply by diversifying sources and suppliers. Developing alternative sources (coal, nuclear, solar power, hydropower, and so forth) will reduce a country's dependence on a single energy source. Similarly, by opening contacts with other suppliers a country will reduce its dependence on a single supplier of energy.[7]

To ensure these policies, an effective state capable of anticipating, assessing and finding solutions to its energy problems is undoubtedly needed, especially in situation where demand for energy supplants the

capacity to supply. This paper attempts to discuss the resurgence of the state as an important actor in dealing with energy crisis. The shortfall of oil supply and the steady increase of oil consumption in the past few years – which resulted in sharp increase of oil prices – have rendered the state responsible for formulating and implementing energy policies to ensure national security. The U.S. experience in dealing with energy crisis will be used as illustration. U.S. experience in dealing with energy crisis is relevant to our attempt to understand how crucial the role of the state – with its monopoly over the use of power and its status as a sovereign entrepreneur – in dealing with energy crisis. The ever increasing deficit of oil consumption has allowed the U.S. government to gain more power and authority in forcing consumers to reduce their dependence on fossil fuel and look for alternative energy sources. As a sovereign entrepreneur, the U.S. government mobilizes all resources – especially state funds – to develop alternative energy sources.

The discussion will be divided into three main sections. The first section will analyze the resurgence of states as prime actor in international relations. After being sidelined for sometime (due to the transformation of international issues from traditional strategic-military concern into economic and humanitarian concern), the state regained currency in the wake of terrorist and energy threats. The second section will discuss the current energy security problem and how it affects nation-states. The final section will analyze U.S. response to current energy crisis. Attention will be put on how U.S. government produce and implement energy policies to ensure its national security. The U.S. experience seems to indicate that in such a desperate situation, the state needs to intervene to ration fossil fuel, reduce domestic consumption, and establish good relationship with large oil producers to ensure continuity of oil supply. For this purpose, the U.S. government needs to use its power and authority.

THE RESURGENCE OF THE STATE

What makes Realism believe that the state is the most important, if not the only, legitimate actor in international relations? Since the Treaty of Westphalia in 1648, nation-states have been considered as the most important unit in international relations. Realist' belief that states are principal actors of international relations is concurrent with its basic argument that international relations as a discipline mainly deals with struggle for power between states. In the words of Hans J. Morgenthau: "International politics, like all politics, is a struggle for power. Whatever the ultimate aims of international politics, power is always the immediate aim.".[8] Because the state is believed to hold the ultimate authority to exercise power vis-à-vis other states, Realism believes that the state should be treated as the primary unit in analyzing international politics. Meanwhile, non-state actors such as TNCs, INGOs, and others are considered as being less important. For Realist thinkers, the state is both "unitary" and "rational". It is unitary because any difference of view among political leaders or bureaucracies within the state are ultimately resolved so that the state speaks with one voice; and it is rational insofar as it strives to achieve

goals in light of its existing capabilities and power.[9]

As mentioned earlier, transformation of international issues in the past few decades had made the state lost its significance. In their book, Joseph Camilleri and Jim Falk argues that "state sovereignty" discourse posed by Realism is facing a serious challenge. As a result of global integration in economy, politics and technology, they argued, state influence has been overshadowed by the growth of new social movements seeking to find ways of expressing themselves politically outside the boundaries of mainstream politics.[10] Disappointment with arbitrary rules set up by organizations of the states such as the WTO, IMF and the World Bank, has prompted the rise of global social movements to challenge globalization and neoliberalism. Beginning from the WTO summit in Seattle in November 1999, these anti-globalists formed a transnational network of activists pressing for more equal distribution of resources, equality between men and women, the protection of the environment, and so on.

Because these movements operate outside, if not against, the state at the international level, we may expect the rise of international civil society. Alejandro Colas defined international society as a sustained and purposeful collective mobilization by self-organized groups operating internationally in confrontation with specific power structures and in the pursuit of socio-economic and political change.[11] The main agenda of these movements is to resist and challenge norms and practices they consider as against humanity. In the words of Manuel Castells:

> [Spatial forms] will express and perform the interests of the dominant class according to a given mode of production and to a specific mode of development. They will express and implement the power relationships of the state in a historically defined society. They will be realized and shaped by gender domination and by state-enforced family life. At the same time, spatial forms will also be marked by resistance from exploited classes, oppressed subjects, and abused women.[12]

Does the growth of international civil society necessarily weaken the state? Despite conviction that international civil society may serve as moral entrepreneurs or cornerstone of the "cosmopolitan democracy",[13] the state may not necessarily be reduced into trivial actor in the struggle for global norms. Writing in the context of former Yugoslavia, Mary Kaldor argues that civic values cannot survive without state intervention. Although civil society may have played crucial role in disseminating democracy, she argues, ethnic and religious conflicts had rendered civil society vulnerable to hatred, ultra-nationalist sentiment, and violence. Thus, civil society cannot be a substitute for the state; and in order to survive civic values need a rule of law (which can only be provided by the state).[14]

In the early 1990s, in the wake of post-Cold War optimism, Mark W. Zacher argues that reasons for the state to wage in war with one another had been substantially reduced which led to the decline of the state-oriented Westphalian system. Not only that the collapse of communist states had dimi-

nished ideological conflict, but also the use of nuclear weapons had generated deterrence where no states really want to involve in a nuclear war.[15] Moreover, the transnationalization of production, investment, trade, and finance has made territoriality become less important because states are required to merge their economic policies in order to secure access in the global market and transactions.[16] But in just a decade later, the situation had changed dramatically. Global terrorist threat had given nation-states new reasons to wage war. Although it may not necessarily reflect what Huntington called a "clash of civili-zation", Western countries – especially the U.S. and Great Britain – are prepared to wage a "war on terrorism" by invading Afghanistan and Iraq. Moreover, economic policy convergence seemed unable to re-duce tensions between developed and de-veloping countries in international trade, especially in agricultural sector. For these reasons, the new millennium seems to wit-ness a resurgence of the state.

What is so special about the state? Why does state matter? To answer these questions we need to look at the nature and character of the state. Charles Tilly defined the state as "an organization which controls the population occupying a definite territory insofar as (i) it is differentiated from other organizations operating in the same territory; (ii) it is autonomous; (iii) it is centralized; and (iv) its divisions are formally coordinate with one another".[17] This defini-tion offers fundamental and abiding fea-tures of the state. As an organization who claims legitimacy in a given territory and citizens, the state bears the monopoly to use coercion and secures sovereignty to control its citizens. Gianfranco Poggi averred that the state functions as last-resort control, that is, exercising control on population while at the same time paying attention to individual integrity, safety and freedom from physical abuse. He also asserted that as a sovereign entity, the state must exercise control on its own account (not from other power) and activate its own resources unconditionally; and this control cannot be challenged or limited by appealing to a body of juridical rules for such rules are themselves are part of the state's authority.[18] In other words, the state is both sovereign power holder and entrepreneur in a given territory.

It is the nature of the state as a sovereign entity with monopoly to use coercion that makes it relevant to argue for the resurgence of the state as primary actor in international relations. In the era of global turbulence where transnational agencies and the states are pitted against one another, security can only be achieved if rule of law (which can only be provided by the state) is put into effect. Despite the growing role of TNCs, INGOs, transnational agencies, and transnational social movements, we still need the presence of the state which can ensure law enforcement to create security and order.

In the wake of energy crisis (marked by the soaring oil prices) in the past few years, Realism suddenly finds its way in contemporary study of international affairs. By putting emphasis on the significance of the state, the argument of this paper inevitably goes along the line with traditional realism. Developed by Thucydides *circa* 400 B.C., traditional or political realism swept the field in the U.S. during the postwar years.

Its main emphasis is on the role of the state (or city-states) as the key unit of action.[19] In the early 1960s, however, traditional real-ism began to face challenges. Morgenthau, the guru of traditional realism, had been criticized for failing to differentiate be-tween power as a resource and power as the ability to influence others' behaviour. He could not give satisfactory answer on question such as: is others' behaviour influenced by tanks, superior economic productivity or by an attractive ideology? It was Kenneth Waltz who developed a new way of explaining state behaviour. Dubbed as structural realism, this new approach argues that state behaviour can be explained by looking at the structure of the international system which is by nature anarchic and interactive.[20] This paper will not go into detail of arguments within Realism, rather it will suggest that energy security issue has brought the state into the center stage of analysis because its power (both internal and external) and authority is much needed to devise an effective energy policy, especially in such a desperate situation of deficit faced by the U.S.

ENERGY SECURITY AND THE STATE

Throughout human history, the foundation of civilization has rested upon the availability of energy supply. From ancient Egypt under the Pharaohs to the modern civilization, human being has always been dependent on energy. During the pre-historic era, old civilizations relied heavily on human slaves and animals as their primary energy source. To move their ploughs, chariots, ships and other equipments people in early civilization use slaves, horses, cows and donkeys. The nineteenth-century Industrial Revolution in Europe and North America was powered by coal. Nowadays, no countries can escape from oil and gas as a source of energy. The massive expansion of automobiles (mostly powered by gasoline and diesel) as a means of transportation has generated demand for more oil and gas. Major oil companies such as Exxon, Gulf, Mobil, Standard Oil of California, Texaco, British Petroleum, Royal Dutch Shell and Compaigne Francais des Petroles (CFP) intensified their production in order to meet the growing demand for oil. Modern industries and households have opted for oil and gas – instead of coal – due to the practicality of their use and less environmental costs.

The concept of 'energy security' has been long forgotten. Except during the brief period of Oil Embargo in the mid-1970s, where oil consumers and importers were devastated by the production cut, oil as one prominent source of energy tends to be widely available at relatively cheap price. This has made consumers find little incentive to develop alternative source and therefore rely so much on oil and gas. As Willrich put it:

> [T]he ... result of declining real prices for oil and gas, however, was a slowdown in development of petroleum reserves outside the Middle East. The development of alternative sources of energy was also discouraged. Many existing coal mines were abandoned, and new ones were slow to be started ... A declining price is socially desiable if it reflects an abundance of a natural resource. But such a price trend can be very costly in the long run if it fails to anticipate resource

scarcity or reflect environmental and social costs.[21]

Indeed, the period from the end of World War II until the 1970s was an era of cheap energy derived from fossil fuels. The era was based mainly on the development and production of low-cost oil deposits, the main concentration of which was in the Middle East. Large consuming countries, such as the U.S., have their own oil reserve, but it appeared to be more cost-efficient for these countries to buy from the Middle East rather than exploring and producing from their own reservoirs. Large oil reservoirs are called "Super Giants", many of which are discovered in the Middle East. Super Giant oil reservoirs are generally easiest to find and therefore highly economic to develop. However, they are not widely available. Robert Hirsch, et al. estimated that the last discovery of Super Giants was in 1967 and 1968. Since then, smaller reservoirs of varying sizes have been discovered in various places in Southeast Asia (Indonesia and Brunei), Latin America (Venezuela and Brazil), and the North Sea in Europe.[22]

Geologists believe that oil is a finite resource in the earth's crust; and at some future date world oil production will reach a maximum point – a peak – after which production will decline. This logic follows from the fact that oil reservoirs tend to rise after discovery, but after reaching their peak will decline. In order to anticipate the future of oil industry, geologists invented the concept of "peak" which means a reservoir's maximum oil production rate that happens after roughly half of the recovered oil has been produced.[23] Different individuals or agencies have different opinion about the possible "peak" of world oil production as well reflected in table 1.

Table 1
Projections of the Peaking of World Oil Production

Projected Date	Projecting Experts	Projecting Institutions
2006-2007	A.M.S. Bakhitari	Iranian Oil Executive
2007-2009	M.R. Simmons	Investment Banker
After 2007	C. Skrebowski	Petroleum Journal Editor
Before 2009	K.S. Deffeyes	Oil company geologist
Before 2010	D. Goodstein	Vice Provost California Institute of Technology
Around 2010	C.J. Campbell	Oil company geologist

Source: Robert Hirsch, Roger Bezdek and Robert Wendling. *Peaking of World Oil Production: Impacts, Mitigation and Risk Management*. Report to the U.S. Department of Energy. Washington, D.C.: National Energy Technology Laboratory, 2005, p.19.

Although experts have different projections about the peaking of world oil production, they mostly agree that by 2010, world oil production will undeniably decline. As we may be well aware, oil exploration is still inexact and unpredictable. In the early days (in the mid 1800s), prediction of peaking was no more than guesses without basis. But, with the development of science and technology, more can be said about the peaking of world oil production on the basis of surface signature, the rock formations, and so on. If we look at the recent trend in world oil production and consumption, the situation is rather ambiguous. For example, between 1990 and

1998, there was a sharp decrease in oil production and consumption in former Soviet Union, but at the same time, there was a sharp increase in both demand and production in other areas. Table 2 indicates this mixed picture.

Table 2
World Oil Production, 1990 and 1998
(in thousand barrel per-day/bpd)

Producers	1990	1998	Increase
OPEC	24,865	30,730	5,865
Non-OPEC	29,285	35,015	5,730
Former Soviet Union	11,570	7,360	- 4,210
World TOTAL	65,720	73,105	7,385

Source: Asia Pacific Energy Research Centre. 2000. *Emergency Oil Stocks and Energy Security in the APEC Region.* Tokyo, p.3.

However, the rapid increase of oil prices in the past few years has raised concern whether world oil production can meet the increasing demand of oil. The fastest oil price increase occurred during 2003-2005. For example, in September 2003, oil price at the NYMEX (New York Mercantile Exchange) was recorder at US$25 per-barrel. In August 2005, the price was almost tripled reaching US$70.85 per-barrel..[24] Rapid industrialization and the increasing use of oil as a source of energy for many transportation facilities (automobiles, trains, ships, airplanes, and so forth) seem to have caused growing demand on oil. At the same time, war and conflicts in many parts of the oil-prone areas have caused disruptions to world oil production. Mark Lindsay argued that frequent attacks and sabotage against oil companies operating in conflict zones such as Colombia, Nigeria and former Soviet Union had cost oil companies and countries multi-billion dollars per-year. In Colombia alone, the government lost revenue of around US$500 million per-year due to sabotage of oil pipelines by insurgents..[25] These factors seem to have generated deficit between supply and demand in oil sector which substantially generates price increase.

Oil is produced in 123 countries. The top 20 producing countries provide over 83% of total world oil. In 2002, the total world oil production was estimated at about 73.3 million barrel per-day. At the same time, 214 countries throughout the world consumed oil regularly. The top 20 consuming countries consume over 76% of the total world oil consumption. In 2002, the total world oil production was estimated at about 78.3 million barrel per-day..[26] This data shows that in 2002 there was a deficit of -5 million barrel per-day in the supply and demand for oil. Table 3 indicates the top world oil producing and consuming countries in the year 2002.

Table 3
Top World Oil Producing and Consuming In 2002
(in million barrel per-day/bpd)

	Producers			Consumers		
Rank	Country	Production	Percent	Country	Consumption	Percent
1	United States	9.0	11.7	United States	19.8	25.3

2	Saudi Arabia	8.7	11.3	Japan	5.3	6.8
3	Russia	7.7	10.0	China	5.2	6.6
4	Mexico	3.6	4.7	Germany	2.7	3.5
5	Iran	3.5	4.6	Russia	2.6	3.3
6	China	3.5	4.6	India	2.2	2.8
7	Norway	3.3	4.3	South Korea	2.2	2.8
8	Canada	2.9	3.8	Brazil	2.2	2.8
9	Venezuela	2.9	3.8	Canada	2.1	2.7
10	United Kingdom	2.6	3.3	France	2.0	2.5
11	UAE	2.4	3.1	Mexico	2.0	2.5
12	Nigeria	2.1	2.8	Italy	1.8	2.4
13	Iraq	2.0	2.7	United Kingdom	1.7	2.2
14	Kuwait	2.0	2.6	Saudi Arabia	1.5	1.9
15	Brazil	1.8	2.3	Spain	1.5	1.9
16	Algeria	1.6	2.0	Iran	1.3	1.7
17	Lybia	1.4	1.8	Indonesia	1.1	1.4
18	Indonesia	1.4	1.8	Taiwan	0.9	1.2
19	Kazakhtan	0.9	1.2	Netherlands	0.9	1.1
20	Oman	0.9	1.2	Australia	0.9	1.1
	Other 103 countries	12.6	16.3	Other 194 countries	18.4	23.5
	TOTAL	73.3	100	TOTAL	78.3	100

Source: Energy Information Administration (EIA). 2004. *World Production of Crude Oil, NGPL, Other Liquids, and Refinery Processing Gain 1980-2002*. Washington, D.C.: U.S. Department of Energy.

The deficit in supply and consumption seems to have generated rapid increase between 2003 and 2005. Take the U.S. as an example, from table 3 we can see that in 2002 this country produced oil of around 9 mil-lion barrel per-day, yet at the same year it consumed around 19.8 million barrel per-day. This means the U.S. must import crude oil of around 10.8 million barrel per-day. Other highly industrialized countries such as Japan, China and Germany must acquire almost all of their oil consumption from other countries because they are not listed among the top twenty oil producers. If world oil production is not increased, we can expect a continuing increase of oil prices.

Nowadays, world leaders begin to think of energy security. Some of them suggest the diversification of energy source. The British Prime Minister, Tony Blair, for example, bowed to pressure from the leading Industrial lobby group, the Confederation of British Industry (CBI), to allow the burning of alternative fuels in the case of shortage, even if they raise pollution levels.[27]. The desperation to contain oil crisis had made policy makers pay more attention to 'energy security'. Mason Willrich defined 'energy security' as 'the assurance of sufficient energy supplies to permit the national economy to function in a politically acceptable manner.'[28]. For importing countries, sufficient energy supply to ensure political and economic stability can mean securing the minimum energy required to sustain a tolerable level of social and economic activity.

Thus, in order to ensure energy security the state is needed to perform several activities. First, the state must assess damage from possible supply interruptions and find solutions to the problems. This may include stand-by rationing plans and stockpiling. By rationing we mean demand for restraints in the use of oil as primary source of energy. In doing so, the state may set taxes on oil and gas. Second, the state may ensure supply by strengthening guarantees of foreign supply. With over 60% of the world's oil reserve, the Middle East serves as the prime target of world oil consumers. U.S. Vice President, Dick Cheney,[29] who leads an Energy Task Force, for example, noted in his report: "By any estimation, Middle East oil producers will remain central to world oil security. The Gulf will be a primary focus of U.S. international energy policy."[30] Third, the state may ensure energy security by increasing self-sufficiency. This option is available only for industrial countries with relatively large undeveloped domestic energy resources. In situation of scarcity, it is highly recommended that the state mobilize human resources, capital, technology and management in ensuring self-sufficiency. Undoubtedly, measures in ensuring energy security will require law enforcement and the use of force that can only be provided by the state.

US RESPONSE TO CURRENT ENERGY CRISIS

After the oil price shocks and supply disruptions in 1973-1974 and 1979, oil consumption in the U.S. decreased 13%, declining from around 35 quads in 1973 to 30 quads in 1983. However, overall consumption showed a steady increase after 1983 and has continuously increased in the last two decades reaching over 39 quads (equal to 19.8 million barrels per-day) in 2002 (see table 3). Although oil consumption in the U.S. has declined in several sectors, the expansion in the transportation sector has contributed to the growing consumption. For example, oil consumption in the residential sector had decreased from 8% of total consumption in 1973 to 4% in 2003. Oil consumption in the commercial sector also declined from 5% in 1973 to 2% in 2003. Similarly, oil consumption in the electric power sector decreased from 10% in 1973 to merely 3% in 2003.[31] This means the U.S. government had done reasonably well in using alternative energy sources (liquid natural gas, nuclear, hydropower, solar power, and so on) at least in these three sectors.

However, the revolution in transportation industries in the past few decades has rendered the country more dependent on oil. From 1973 to 2003, while consumption of oil in the industrial sector stayed relatively flat at just over 9 quads (around 25% of total oil consumption), oil consumption for transportation purposes increased steadily, rising from just over 17 quads in 1973 to 26 quads in 2003. By 2003, the transportation sector constituted two-thirds (66%) of the total oil consumed in the U.S.[32] The reason for this rise is the substantial growth of personal transportation that made total miles traveled for cars and light trucks more than doubled over the period.[33] Automobiles represent the largest propor-tion of oil-consuming capital stock in the U.S.. By 2003, the 130 million automobiles in the U.S. consumed 4.9 million barrel per-day (bpd), or 25% of total consumption. Other

types of vehicles (vans, pick-up trucks, SUVs, and heavy trucks) consumed 6.6 million barrel per-day (bpd), or 34% of total U.S. oil consumption. Oil consump-tion in air transportation was surprisingly low at around 1.1 million barrel per-day (bpd), or 6% of U.S. consumption.[34] Table 4 indicates detailed consumption of oil in the U.S. by fuel type and sector.

Table 4
U.S. Consumption of Oil by Fuel Type and Sector, 2003
(in thousand of barrel per-day/bpd)

Gasoline	-	20	159	8,665	-	8,844
LPG	429	76	1,648	10	-	2,163
Residual	-	30	87	250	291	658
Petrol Coke	-	-	398	-	61	459
Aviation Gas	-	-	-	18	-	18
TOTAL	877	371	4,928	13,079	403	19,658

Source: U.S. Department of Energy at http://www.eia.doe.gov (accessed on 12 December 2005).

Increasing oil consumption has direct effect on U.S. economy. For the U.S. each 50% sustained increase in the price of oil will lower real U.S. Gross Domestic Product (GDP) by about 0.5%, and a doubling of oil prices would reduce GDP by 1%. Thus, a triple increase of oil prices during 2003-2005 could drive the country into recession. Assuming an increase of oil price in the US$25 per barrel range (the 2002-2003 average), an increase of the price of oil to US$50 per-barrel would cost a reduction in GDP of around US$125 billion. Robert Hisrch, et al. estimated that oil supply disruptions over the past three decades have cost the U.S. economy of about US$4 trillion.[35] For this reason, U.S. government realizes the gloomy prospect of oil as a source of energy. In his speech after the Katrina storm hit the Gulf of Mexico in August 2005, President Bush confessed: "The storm has disrupted the ability to make gasoline and deliver gasoline. This is going to be a difficult road ahead."[36]

The U.S. government desperately attempts to find solution to the problem. It set up a task for called National Energy Policy Development Group (NEPD Group) chaired by Vice President Dick Cheney. Based on recommendations from NEPD Group, the government focused its energy policy on five major areas of concern:[37]

- *Price Mitigation Program*: the president take steps to mitigate impacts of high energy costs on low-income consumers by setting up the Low Income Home Energy Assistance Program (LIHEAP)

whose main activity is to compensate low-income oil consumers. The government is believed to have provided US$1.7 billion annually to support this program.

- *Energy Efficiency Policies*: the president directs the Office of Science, the Technology Policy and the President's Council of Advisors on Science and Technology, and the Secretary of Energy to promote greater energy efficiency which includes attempt to strengthen Department of Energy public education programs relating to energy efficiency and the setting of higher energy-efficiency standards for all kinds of appliances used in households and commercial sectors. In order to reduce oil consumption in the transportation sector, the government (through the Secretary of Transportation) devises programs to promote congestion mitigation technologies and strategies which include: (1) the development of hybrid fuel cell technology for transport vehicles; (2) the provision of tax cuts for fuel-efficient vehicles; and (3) the introduction of Intelligent Transportation Systems (ITS) using fuel cell as a source of energy..
- *Increasing Domestic Energy Supplies*: the president directs the Secretary of Energy and the Secretary of Interior to promote enhanced oil and gas recovery from existing wells through new technology; and to improve oil and gas exploration technology through continued partnership with public and private entities. Policies in this category includes: (1) examination on land status; (2) leasing stipulation impediments to federal oil and gas leasing agencies; (3) reviewing and modifying existing oil and gas production practices to ensure good environmental practices; and (4) reviewing public lands withdrawals and lease stipulations with full public consultation. In its attempt to ensure energy security, the U.S. government also encourages diversifycation in energy sources by: (1) investting US$2 billion over the period of 10 years to fund research in clean coal technologies; and (2) encouraging the Nuclear Regulatory Commission (NRC) to ensure that safety and environmental protection are high priorities as they prepare to evaluate and expedite applications for licensing new advanced-technology nuclear reactors.
- *Developing Renewable Energy Sources*: the president directs the Secretary of the Interior and the Secretary of Energy to re-evaluate access limitations to federal lands in order to increase renewable energy production such as biomass, wind, hydropower, geothermal, and solar. Based on suggestion from NEPD Group, the U.S. government issued extra funding of US$39.2 million for the Department of Energy to conduct research and development of renewable energy resources. The U.S. government (through the Secretary of the Treasury) also works with Congress on legislation to extend and expand tax credits for electricity produced using wind, solar and biomass. For each residential solar energy property, the U.S. government provides a maximum credit of US$2,000.
- *Strengthening Relations with Foreign Oil Producers*: the president directs the Secretary of State, the Secretary of Commerce, and the Secretary of Energy to strengthen support American energy

firms operating overseas. The U.S. government also uses its membership in multilateral organizations such as the Asia Pacific Economic Cooperation (APEC) forum, the Organization for Economic Cooperation and Development (OECD), the World Trade Organization's (WTO) Energy Services Negotiations, the Free Trade Area of the Americas (FTAA) to ensure access for foreign oil supplies. Negotiations on oil and gas exploration and production are currently held between various American oil companies, the U.S. government and governments of Iraq, Canada, Venezuela, and Brazil.

The U.S. experience in dealing with current energy crisis tells us that an effective energy policy in scarcity situation will require state power and authority to produce and enforce laws. U.S. energy policies which include budget allocation, investment, licensing, creating incentives for using alternative energy sources, and diplomacy categorically need state intervention. Current energy crisis could not be left to the invisible hands of the free market; it needs a consolidated state bureaucracy to mobilize funds, technology, human resources, and management. State bureaucracy is also needed to enforce laws in order to ensure national energy sufficiency, the development of alternative renewable energy sources, and energy efficiency.

For a super power such as the U.S. ensuring energy security is necessary. Given its economic dominance, the energy crisis in the U.S. will subsequently leads to economic recession. This may in turn shrink the world economy. Economic decline in the U.S. will likely reduce export earnings of the developing countries. Mason Willrich correctly argued: "A great power should be largely self-sufficient in energy resources... If a great power permits itself to become substantially dependent on foreign energy supplies, it will thereby expose not only itself but possibly the entire world community to major security risks"..[38]. Despite criticism on the relevance of hegemonic stability theory, the U.S. experience suggests that the ability of the country's government to mend the negative impacts of current energy crisis will seem to generate positive impact on the world economy.

CONCLUSION

This paper has attempted to discuss that current world energy crisis has generated a momentum for the resurgence of the state as prime actors in international relations. After being forced to retreat during the wake of soft-politics and the non-traditional security issues, the state is now regaining currency. The deficit in the world supply of oil has substantially increased oil prices. Within the period of two years, oil prices almost tripled causing problems for world industries, especially the transportation sector. Rapid increase in oil prices has forced airline companies to impose surcharge on top of the normal ticket price. If statism is believed to be the main property of traditional or classical realism developed by Thucydides and later by Morgenthau, the argument of this paper seems to go along the line with traditional or classical realism.

In situation where a country is in desperate need of oil, talks about energy security become increasingly important and solu-

tion to energy crisis has become more crucial. Experts, businessmen and policy makers work together to find possible solutions to the crisis. Most of energy policies are based on the very idea of assuring supplies of sufficient energy at equitable prices with acceptable environmental consequences. Countries such as the U.S. opted for efficiency by reducing consumption. At the same time, in order to maintain normal economic activities the U.S. government – and indeed many other governments in oil-consuming countries – encourages the use of alternative energy sources. While coal and nuclear power has been criticized for being environmentally unfriendly and dangerous, many governments turn into renewable energy sources such as biomass, wind, hydropower and solar. However, these sources could not be applied to the transportation sector which is still dependent on oil.

Given the fact that the transportation sector – at least in the U.S. – is the major consumer of oil, attempts need to be done to fight the sharp increase of oil consumption in this sector. Governments need to generate efficiency by reducing traffic congestion in major cities, introducing hybrid fuel cell technology, implementing strict fuel-efficiency policy in automobile industries, creating non-oil powered public transportation facilities, and so on. To do all these measures, a state needs to coordinate its bureaucracy and enforce laws. The U.S. government is an example of how a coordinated effort may generate positive results. Our discussion does not deal with the level of success or failure of the U.S. government in solving current energy crisis. What we try to discuss is that a consolidated state with effective bureaucracy is desperately needed to solve energy problems.

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