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Dennis C. Stickley

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NEW FORCES IN INTERNATIONAL ENERGY LAW: A DISCUSSION OF POLITICAL, ECONOMIC, AND ENVIRONMENTAL FORCES WITHIN THE CURRENT INTERNATIONAL ENERGY MARKET

*Dennis C. Stickley**

I. INTRODUCTION

A. *A Metaphor for our Profession*

The inspiration for this paper came from an impromptu conversation I happened to have with one of the partners at my new firm. Despite his senior standing in the New Zealand energy bar, my colleague remains an avid surfer.¹ As we spoke on the twentieth floor of our offices in Wellington's financial district, a copy of a long-range weather forecast was thrust in front of me. He pointed at the isograph showing a major atmospheric depression forming over Antarctica. His experienced prognostication was that the waves created by these conditions would travel thousands of miles of unbroken Pacific Ocean, meaning that next week's surfing conditions on the California coast would be ideal.

As counsel, we are tasked with the responsibility of providing professional advice or direct representation to our clients or employers. It is incumbent on us to stay abreast of current developments in our chosen field of practice. The volume of material published under the topical headings of "Recent Developments"² or "Current Issues"³ demonstrates how attention is constantly focused on spotting trends and innovations.

* Dennis C. Stickley, licensed to practice in the United States and New Zealand is currently with Bell, Gully, Buddle, Weir in Wellington, New Zealand. He received his M.S., J.D. from the University of Wyoming and his LL.M. from the University of Utah. This article was presented at the International Energy Law Symposium, University of Tulsa College of Law, Spring 1993.

1. The better term in colloquial usage is "dead-keen." The author acknowledges the contribution of Mr. James Max Duddingston Willis, LL.M. to this paper.

2. See Thomas W. Wälde, *Innovations in Petroleum and Mining Licensing?, Current Issues in Finance, Energy and Resources Law '92*: 10th Advanced Seminar on Petroleum, Minerals, Energy and Resources Law Proceedings 393 (Washington, D.C. Apr. 5-10, 1992).

3. IBA Section on Energy & Natural Resources Law, Topic 2: *Current Issues in Finance, Energy and Resources Law '92*: 10th Advanced Seminar on Petroleum, Minerals, Energy and Resources Law Proceedings (Washington D.C. Apr. 5-10, 1992).

In this way, we are much like my surfing colleague looking for the next wave to ride. The real question is how far out our forecasting horizon should extend.

B. *New Forces*

Accepted notions of commercial behavior are being reshaped as form follows function. The ability to manage change is now the benchmark of successful twenty-first century firms. A new business paradigm is emerging in response to the following forces:

- The collapse of Communism;
- The surge of privatization of state controlled organizations;
- The emergence of regional trading blocs;
- The rapid diffusion of cellular, facsimile, and satellite communication;
- The dramatic advance in information technology;
- The proliferation of strategic alliances.⁴

Another significant agent of change which is not to be overlooked is the increased awareness of environmental inter-relationships.⁵

This paper will discuss three potent, institutional forces that sometimes converge and at other times act independently, which are producing fundamental changes in the international energy industry.⁶ While the subject matter of this paper uses illustrations primarily drawn from the petroleum sector, the impacts of these factors are equally profound in electrical generation and other fuel minerals.

Briefly, these forces are: the privatization or corporatization of previously state-owned assets, environmental protectionism, particularly under the new organizing principle of "sustainable development," and the change in multi-lateral trade policy through the emergence of "triads." The significance of these forces is described in the following sections on Privatization, Sustainable Development and Trade Triads.

C. *Privatization*

The role of the State as the dominant player in commercial activities of the energy industry reached its zenith in the 1970s.⁷ This era saw the formation of some of the world's largest trading energy groups such as British gas, Saudi Arabian oil, and Soviet nuclear power under direct governmental ownership as strategic industries for national economic growth and development. This was also the period when regulatory control over

4. See Jerry Wind and Alfred P. West Jr., *Reinventing the Corporation*, CHIEF EXECUTIVE, Oct. 1991.

5. See STEPHAN SCHMIDHEINY, *CHANGING COURSE: A GLOBAL BUSINESS PERSPECTIVE ON DEVELOPMENT AND THE ENVIRONMENT* (1992).

6. The force of technology as an influence in energy production and use is not purposefully neglected. The first commercial fuel cell power plant in the U.S. is now operational. *Japan Launches World's First Superconducting Ship*, REUTERS, Jan. 27, 1992, available in LEXIS, NEXIS Library, Reuters file. Super conducting electromagnetic propulsion (SEMP) is being tested in Japan for application in marine ships and rail transport.

7. Wälde, *supra* note 2, at 1.

energy prices and conditions of service was the most pronounced in North America.⁸

The formation of these state-owned enterprises was a result of the assertion of national sovereignty over energy resources in combination with centralized economic planning. However, history would soon demonstrate these organizations were fatally flawed in the era of market economics.⁹ The competency of administrative agencies and regulatory authorities came under increasing strain as the western world embraced the theory and practice of economic liberalization.

Privatization is now perceived as a universal panacea for under-performing economies in both developed and developing nations.¹⁰ Governments have unwound control of strategic industries in energy and other sectors for a host of reasons. These have included:

- (1) Poor economic productivity and growth performance;
- (2) Ad hoc government interventions and restrictive regulations;
- (3) Inflation and currency devaluation;
- (4) Producer and labor deadlocks;
- (5) Reduction and restructure of the national debt; and
- (6) The disadvantage that publicly-owned companies experience in international competition by being too closely identified with a government.¹¹

There is a growing view that, while assertion of national sovereignty over the resource was an inherent right of nationhood, it is inappropriate to commit the public treasury to the high degree of commercial risk inherent in converting the resource into a commodity.¹²

The resulting deregulation of energy sector industries meant that other models for enterprise management were needed. This has not always meant that there was an immediate transformation from state ministry to public company. The patterns of privatization have varied.

8. The deregulation of prices and conditions for access to transportation systems has been a major factor in the natural gas industry in Canada and the United States. Regulation of Natural Gas Pipelines after Partial Wellhead Decontrol, Interim Rule and Statement of Policy, 52 Fed. Reg. 30, 334 (1987); Restructuring Rule 59 F.E.R.C. (CCH) para. 61,030 (1992); The Western Accord, An Agreement Between the Governments of Canada, Alberta, Saskatchewan, and British Columbia on Oil Gas Pricing and Taxation, Mar. 24, 1985.

9. Market economics are organized around the economic principle that competition imposes discipline on firm behavior and leads to efficient economic growth. The role of the State is to fashion any form of intervention in a way that produces the same results as if effective competition were feasible. ALFRED E. KAHN, *THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS* 17 (1988).

10. In this discussion, privatization is to be understood in its broadest sense to include not only divestment of state-owned enterprises, but also relation between private and public monopolies, reform or repeal of regulations on price, entry, exit and withdrawal of exemptions from competition law. Martin J. Boodhoo, *Some Socio-Economic Implications of Privatization with Specific Reference to Developing Countries*, *POST PRIVATIZATION AND PERFORMANCE: INTERNATIONAL PERSPECTIVES* (University of Bradford, U.K. Mar. 1992).

11. See generally *Privatization and Control of State Owned Enterprises*, Economic Development Institute of the World Bank (1991) [hereinafter *Privatization and Control*].

12. Thomas W. Wälde, *Restructuring and Privatization: Viable Strategies for State Enterprises in Developing Countries*, *POST PRIVATIZATION AND PERFORMANCE: INTERNATIONAL PERSPECTIVES* (University of Bradford, U.K. Mar. 1992).

A common preparatory step in the process of privatization is to replace the control of civil servants by an appointed board of directors with a Minister having portfolio responsibility as the shareholder.¹³ This newly formed state-owned enterprise (SOE) is given a statutory directive to become as profitable and efficient as privately-held firms while adhering to social responsibility criteria. The directors prepare a statement of corporate intent as to the business objectives and standard financial accountability. Ultimately, however, all actions are subject to ministerial oversight and discretionary modification.¹⁴

Privatization has less subtle forms as well. Several countries have adopted legislation that abolishes monopoly authority to conduct services such as mail and telecommunications.¹⁵ The European Commission has emphasized the dismantling of national monopolies, including petroleum exploration, gas and electricity, as part of accession to membership in the EEC.¹⁶

The next logical step in the case of incorporation has been to float the enterprise on the local stock exchange. This process has been particularly favored in Asia.¹⁷ Where it has been feasible to use public offerings, a substantial block of minority shares is commonly held either by the government or employees of the enterprise.¹⁸ Where local share markets are either non-existent or lack the necessary trading depth, governments have been innovative and have used "voucher" schemes that give every adult citizen an equity interest in state-owned industries. Eastern European countries such as Poland, Romania, and Czechoslovakia have taken this approach.¹⁹ The free share is also being used for energy utilities which operate within local areas or franchises. In this situation, the residential, commercial, and industrial users become the shareholders in the system which provides service.

Total divestment or "trade sale" of state-owned industries has been the most conventional means of privatization.²⁰ In countries with stable political systems, acquisition of strategic sector enterprises such as energy, telecommunications and transportation are perceived to be good investments. Governments are anxious to sell, and attractive terms can be negotiated that are often significantly lower than the real value of the company. However, in the face of such criticism, political decision-makers are becoming increasingly sophisticated in attempts to avoid the embarrassment of having sold too cheaply. One option has been the inclusion of special

13. Privatization and Control, *supra* note 11, at 20-21.

14. *Id.*

15. NERA, *Privatization and Restructuring of Public Utilities*, Seminar delivered at the World Bank (Washington, D.C. Apr. 16, 1992).

16. See generally Organization for Economic Cooperation and Development, *Regulatory Reform, Privatization and Competition Policy*, (Brussels 1992) [hereinafter OECD].

17. Giulio Frazinetti, *The World's Fastest State Sell-Off*, ASIA MONEY, July/Aug. 1991, at 23.

18. Privatization and Control, *supra* note 11, at 120.

19. Joseph C. Bell, *Privatization in Central and Eastern Europe*, 14th Annual Institute for Corporate Counsel Doing Business and Investing Abroad 385-405 (August 19, 1991).

20. Peter Holland, *Privatization; An Outburst of Activity*, INT'L FIN. L. REV. 5-6 (Sept. 1992).

minority shareholders' rights for the government through a so-called "golden share." Under this approach, extraordinary changes in rates or conditions of service must be consented to by the government. This concept has been used in the network utilities where cross-subsidization of residential service by business has been retained despite commercialization.²¹ Two other forms of privatization should be mentioned, although they do not involve the transfer of assets so much as having the control and responsibility shifted to private parties.

First, the foreign investment agreement is a technique that is well known in the petroleum exploration industry and had been in use in one form or another since the early 1970s.²² This type of joint venture arrangement, particularly with large, multi-national companies, is seen as the most efficient way to access business expertise, capital, technology, and markets.²³

The second approach, used primarily in the United States, is to contract performance of public services out to private operators.²⁴ Such traditionally governmental functions as urban mass transit, health care, and corrections are being contracted out.²⁵

Private electrical power generation has moved forward more rapidly than other energy sector industries. Chile, England, and Spain are among the first countries to reorganize and privatize their electricity sectors.²⁶ Energy utility has been followed by natural gas, particularly in Latin American countries like Argentina.²⁷ Energy utility operations still exhibit a high degree of state participation. The following table illustrates the pattern of energy sector industry ownership in OECD nations:

TABLE 1
OWNERSHIP OF ENERGY INDUSTRIES IN SELECTED
OECD COUNTRIES

	ELECTRICITY	GAS PRODUCTION	COAL PRODUCTION	OIL PRODUCTION
Austria	■	■	■	■
France	■	■	■	●
Norway	■	◆	■	▲
Italy	▲	■	●	●

21. Keith Palmer, *Techniques of Privatization - The U.K. Energy Industries; A Model for the World?*, Current Issues in Petroleum Law Seminar delivered at the City Conference Centre, University of Dundee Centre for Petroleum and Mineral Studies (Dundee, Scotland Apr. 26, 1991).

22. See generally GORDON H. BARROWS, *WORLDWIDE CONCESSION CONTRACTS AND PETROLEUM LEGISLATION* (1983).

23. Wälde, *supra* note 2, at 2.

24. *Privatization and Control*, *supra* note 11, at 5.

25. The management of both the Naval Petroleum Reserves and Strategic Petroleum Reserves has been contracted out. The approach has also been used by tribal governments in the United States for the management of their oil and gas interests. Bligh & Oil Minerals Ltd., an Australian-owned company, acts as the contractor to the Navajo nation.

26. NERA, *supra* note 15, at 4.

27. *Id.*

Switzerland	■	■	●	●
Denmark	▲	■	●	■
Britain	■	◆	■	▲
West Germany	▲	■	▲	▲
Netherlands	■	▲	●	▲
New Zealand	■	◆	▲	◆
Sweden	▲	■	●	●
Spain	▲	◆	▲	◆
Belgium	▲	▲	◆	●
Australia	■	▲	◆	◆
Canada	■	◆	◆	◆
United States	▲	◆	◆	◆
Japan	◆	◆	◆	●

- More than 75% government ownership
- ▲ Between 25% and 75% government ownership
- ◆ Less than 25% government ownership
- Nil or little production in the country concerned²⁸

State-owned gas companies now dominate the list of major producers. The following table shows the top twenty international producing companies:

TABLE 2
PRODUCTION AND RESERVE LEADERS

RANK	COMPANY	PRODUCTION MILLION BBL
1.	Saudi Arabian Oil Co.	2,977.7
2.	National Iranian Oil Co.	1,255.7
3.	China National Petroleum Company	1,022.0
4.	Petroleos Mexicanos	1,013.0
5.	Petroleos de Venezuela SA	866.9
6.	Royal Dutch/Shell (Netherlands)	760.0
7.	Abu Dhabi National Oil Co.	722.7
8.	Nigerian National Petroleum Corp.	681.5
9.	Pertamina (Indonesia)	580.8
10.	National Oil Corp. (Libya)	550.8
11.	British Petroleum Co. plc (U.K.)	444.0
12.	Sonatrach (Algeria)	293.1
13.	BP (USA)	269.4
14.	Exxon	266.0
15.	Ministry of Petroleum and Minerals (Oman)	259.2
16.	ARCO	244.0
17.	Petronas (Malaysia)	238.0
18.	Petroleo Brasileiro SA (Brazil)	230.0
19.	Oil & Natural Gas Commission (India)	227.4
20.	Elf Aquitaine (France)	203.0 ²⁹

28. Organization for Economic Co-operation and Development, Regulatory Reform, Privatization and Competition Policy (Paris 1992) [hereinafter OECD].

29. Robert J. Beck & Laura Bell, *State Companies Lead OGG100 World Reserves, Production List*, OIL & GAS J., Sept. 28, 1992, at 72.

Deregulation and conditions of access for essential facilities have become critical predicates where energy is concerned.³⁰ Modification of patterns for state control and ownership of enterprises has given rise to the need to set up a workable system of competition. This progression has often moved in tandem with the development of effective capital markets. Formerly legalized monopolies are being abolished.³¹ The European Commission has been persistent in urging its member states to recognize that state or private monopolies are unacceptable in single European markets.³²

Privatization, deregulation, and pro-competitive regulation for the industries involved have meant that their conduct and operation are being subject to relevant competition law.³³ There is a general understanding that contestable markets cannot be achieved if a new entrant is denied access to network utilities such as pipelines, high voltage transmission lines, railways, ports, and processing facilities.³⁴

D. Sustainable Development

Since the adoption of the first comprehensive environmental laws in the late 1960s, protection of the environment has expanded into a global movement. Public opinion polls in the United States and Europe demonstrate that the majority of people ascribe to the view that "greener-is-better."³⁵ The scale of concern embodied in this movement has taken on a decidedly international structure through various international conventions and treaties. The principal protocols are summarized in the following table:

TABLE 3

INTERNATIONAL ENVIRONMENTAL TREATIES & CONVENTIONS

TITLE	DATE	BRIEF DESCRIPTION	IN FORCE
DECLARATION OF THE UNITED NATIONS CONFERENCE ON THE HUMAN ENVIRONMENT	(Stockholm, 16 June 1972)	Contains a declaration of 26 principles for the control, prevention, reduction, and elimination of adverse environmental effects resulting from all sectors in a manner that due account is taken of the sovereignty and interests of all States.	Implementation by Protocol

30. Marion B. Stewart, *Antitrust and the Economics of Natural Gas*, Energy Decisions, Inc. Conference on Antitrust in Natural and Electricity in the 1990s (Washington, D.C. Mar. 7, 1991).

31. Palmer, *supra* note 21.

32. OECD, Competition Policy in OECD Countries (Brussels 1991). For example, the European Economic Commission adopted a Directive on June 26, 1989, based on Article 90 of the EEC Treaty identifying which telecommunication services member states must open up to competition and which services can be reserved to governmental authorities. *EIB President Gives Overview of Bank Lending in Energy Sector*, Reuter European Community Report, Sept. 21, 1993, available in LEXIS, Nexis Library, Reuters file.

33. *Id.*

34. Regulatory Reform, Privatization and Competition Policy, *supra* note 16, at 4.

35. *Environmentalism Runs Riot*, THE ECONOMIST, Aug. 8, 1992, at 11.

Convention for the Protection of the World Cultural and Natural Heritage	(Paris, 23 November 1972)	Establishes the World Heritage Committee; parties to the convention recognize the duty of ensuring the identification, protection, conservation, preservation and transmission to future generations of cultural and natural heritage.	Yes
Convention on International Trade in Endangered Species of Wild Fauna and Flora	(Washington, D.C., 3 March 1973)	Contracting states recognize that international co-operation is required for protection of threatened and endangered species against exploitation in international trade.	Yes
International Convention for the Prevention of Pollution of the Sea by Oil	(London, 1954) as amend 1962.	This convention (known as OILPOL) restricts oil discharges from vessels and oil production facilities.	Yes
International Convention for the Prevention of Pollution from Ships	(Paris, 1973)	The 1978 Protocol to this convention (known together as MARPOL) came into force in 1983 sets down detailed technical rules as international standards for regulation of oil pollution from ships.	Yes
Convention on Long-Range Transboundary Air Pollution	(Geneva, 13 November 1979)	Implementation of Principle 21 of the U.N. Declaration on the Human Environment where the parties recognize the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond their national limits.	Yes
The World Charter for Nature		United Nations General Assembly adopts principles of conservation on non-impairment of essential natural processes, local law and habitat protection.	Implementation by Protocol
United Nations Convention on the Law of the Sea	(Montego Bay, 10 December 1982)	Recognises the right of innocent passage, 200 nautical mile exclusive economic zone, conservation and management of living resources on the high seas, protection and preservation of the marine environment and the exercise of powers of enforcement.	Yes
Convention for the Protection of the Ozone Layer	(Vienna, 22 March 1985)	Further implementation of Principle 21 of the U.N. Declaration of the Human Environment for protection of the ozone layer against negotiated settlement of disputes.	Yes
ASEAN Agreement on the Conservation of Nature and Natural Resources	(Kuala Lumpur, 9 July 1985)	Agreement between six member states as contracting parties to maintain essential ecological process and ensure sustainable utilization of natural resources within the framework of their respective national laws.	Implemented by local law
Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal	(Basel, 22 March 1989)	Parties are to take appropriate measures to ensure adequate availability of disposal facilities for hazardous wastes and other wastes, and may exercise the right to prohibit importation for disposal and will so inform the other parties.	No
Protocol on Environmental Protection on the Antarctic Treaty	(Paris, 1991)	Comprehensive protection of the Antarctic environment and ecological systems. Four specific annexes on impact assessment, conservation of flora & fauna, waste disposal management and prevention of marine pollution.	Yes
Framework Convention on Climate Change Convention on Bio-diversity	(Rio De Janeiro, 14 June 1992) (Rio De Janeiro, 14 June 1992)	Sets targets on stabilize CO ² emissions at 1990 levels through United Nations Programme on the Environment. The treaty has three goals: conservation and sustainable use of bio diversity, and fair-sharing of products made from genestocks.	No

Non-legally Binding Authoritative Statement of Principles for Global Concerns on the Management Conservation and Sustainable Development of all types of Forests.	(Rio De Janeiro, 14 June 1992)	When attempts to negotiate a treaty failed, 17 principles for protection of all types of forests were adopted.	No
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Energy gets prime attention because the environmental consequences from its life-cycle of extraction, conversion, and waste disposal are felt globally, regionally, and locally. This is dramatically illustrated by the fact that all of the specific environmental initiatives nominated by a gathering of fifty leaders of multi-national corporations were energy-related. They included:

- Assess energy efficiency investments at the lowest discount rate applicable to any investment;
- For utilities, set up "best practice" systems to aid developing countries utilities;
- Set up joint international efforts to tackle major projects, such as Soviet gas pipeline leaks;
- Take the lead in energy use labelling on products and processes;
- Make staff available to help East European and developing country companies with energy efficiency and audit efforts; and
- Initiate with governments long-term energy strategies consistent at the national, regional, and global level such as the Japanese Action Programme to Arrest Global Warming ("New Earth 21").³⁶

The one element the environmental movement had lacked since its inception was a central organizing principle. That gap was filled by the report of the Bruntland Commission, which introduced the terminology of "sustainable use" into our lexicons.³⁷

Energy strategists have quickly adopted this philosophy.³⁸ Individual companies have also shown that this principle can be integrated with their corporate objectives.³⁹ The significance of this principle can be demonstrated by tracking the evolution of measures for protecting the quality of the environment. Before doing this it should also be pointed out that environmental protection itself is a blend of two forces. One force is the protection of habitat and species going back to the conservation ethic of Teddy Roosevelt's presidency.⁴⁰ The other force is the protection of public health and workplace safety, which is grounded in the general goal of government to promote the general welfare of its citizens.

36. SCHMIDHEINY, *supra* note 5, at 338.

37. *World Commission on Environment and Development, OUR COMMON FUTURE* 8 (1987).

38. JOHN PEEL, *ENERGY AND THE ECOLOGICAL ECONOMICS OF SUSTAINABILITY* 192-203 (1992).

39. Shell Canada Ltd., *Implementing a Sustainable Development Policy in Shell Canada Limited*, Shell Canada internal document (Sept. 4, 1990).

40. "To waste, to destroy our natural resources, to skin and exhaust the land instead of using it so as to increase its usefulness will result in undermining in the days of our children the very prosperity which we ought by right to hand down to them amplified and developed." President Theodore Roosevelt, Message to Congress (Dec. 3, 1907).

Initially, the approach was to attempt to prevent further degradation of the environment through command-control legislation.⁴¹ The philosophy was "that which was not approved was prohibited." The direction taken was similar to the central role which government played in pervasive ownership or regulation. Impact assessments had to be undertaken, and permits and approvals obtained. Numerical standards and government-mandated design criteria were employed as the control tools.

One variation on this theme was the policy of non-degradation. For example, the 1972 U.S. Federal Water Pollution Control Act contained policy goals for eliminating the discharge of pollutants into the Nation's waters by 1985.⁴²

It was only a short time later that a new approach to environmental management saw the use of performance standards and adaptation of technology as more effective measures. The effectiveness of this approach is illustrated by use of the *Corporate Average Fuel Efficiency* (CAFE) standard, which was a major factor in the improvement of the fuel efficiency of the U.S. automobile fleet between 1973 and 1987. *Best Available Control Technology* (BACT), and *Best Practicable Controls* (BPC) are a recognition that industry, rather than government, possesses the necessary level of technical competence to deal with complex and financially expensive interrelationships.

In the early 1980s, there was a shift of focus to another generation of environmental laws which were directed at response and remediation.⁴³ Not only would new discharges be dealt with, but sites which had been contaminated prior to the enactment of such legislation would be investigated, evaluated, and cleaned up.⁴⁴ The expense of this process also meant that new forms of both liability and funds would need to be marshalled. The criminalization of conduct which violated environmental standards became the forcing action for the "3 R's": Reporting, Response, and Remediation. Enforcement statistics from the United States show that in 1990-91 criminal charges were filed against 164 defendants, and convictions or guilty pleas were obtained in 124 such cases.⁴⁵

Strict liability (criminal and civil) without regard to either fault or mental intent has been an added incentive for maximum compliance. Few jurisdictions have made environmental offenses subject to absolute liability, and the accused can generally be absolved within a narrowly-drawn statutory defense. Eastern European nations such as Poland and Hungary have placed heavy reliance on criminal sanctions.⁴⁶ Some strict liability regimes have also set financial limitations on the extent of recovery.

41. SCHMIDHEINY, *supra* note 5, at 37.

42. 33 U.S.C. § 125(a) (1972).

43. Comprehensive Environmental Response Compensation & Liability Act, 42 U.S.C. §§ 9601-9675 (1980).

44. ALEXANDRE KISS AND DINAH SHELTON, *INTERNATIONAL ENVIRONMENTAL LAW* 314-18 (1991).

45. T.E. Hunt, *Innovative Approaches to Environmental Enforcement*, Office of Enforcement Policy (U.S. Environmental Protection Agency, Washington D.C.).

46. *Environmental Law: A Guide for Corporations*, EUROMONEY 27 (1992).

For example, The International Convention on Civil Liability for Oil Pollution Damage sets a limit of \$134 per gross registered ton or \$14 million whichever is less. The \$2 billion that Exxon paid for the discharge from the *Exxon Valdez* is contrasted by the liability cap for the *Braea* grounding in the Shetland Islands.⁴⁷ Special funds or accounts were established so that governments or industrial groups would have, on stand-by, the resources to respond when the responsible party either would not or could not meet its obligations.⁴⁸

We are now at another stage in the evolution of legal regimes for protection of the environment. This is due to the inadequacies, not the successes, of the first two. Complex and detailed regulations have become expensive to administer and are inflexible and inefficient in obtaining environmental goals. Both are market-driven. Economic instruments, the so-called "blue and green taxes," are employed to add fiscal incentive to reduce pollution.⁴⁹ In the case of the energy industry, carbon taxes compare as a more favorable alternative to the package of regulations being designed to meet the goals governments set for themselves at the Rio Earth Summit, held in June 1992, for the reduction of carbon dioxide emissions levels to 1990 levels.⁵⁰ Corporate policy statements, codes of practice, regular auditing, and work force training have become the main components of industry self-regulation. Collectively, they amount to a program of behavior modification and the tacit recognition that those closest to the process know best how to manage it. This is where sustainability best fits into the equation.

Acceptance of self-regulation can be furthered by incorporating the principles of sustainable development.⁵¹ Adoption of international standards can be used to demonstrate to regulators and to the public that a company adheres to the "best practice" rules for its sector, including environmental management.⁵² For example, The International Standards Organization (ISO) and British Standards Institute (BSI) have each developed comprehensive standards for corporate environmental management systems. Trade associations have played an important role in advancing codes of environmental conduct for their subscribing members. The Australian Mining Council has developed detailed recommendations on land reclamation for its members.⁵³ An impressive array of firms have shown their commitment to recognize environmental values in the adoption of corporate policy statements and guidelines. Trained environmental profes-

47. The International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, for example, sets an initial level of \$30 million per incident, which is subject to being increased to \$60 million.

48. Percy L. Angelo & E.P. Greeno, *The Well Protected Oil Operators*, FIN. TIMES, Apr. 20, 1989, at 11.

49. Christopher Shaw, *Green Taxes and Blue Taxes: A Comparative Study of the Use of Fiscal Policy to Promote Environmental Quality*, 15 NATURAL RESOURCES FORUM 35 (1991).

50. *Carbonated Growth*, THE ECONOMIST, Aug. 8, 1992, at 59.

51. SCHMIDHEINY, *supra* note 5, at 38.

52. *Id.*

53. *Mining Rehabilitation Handbook*, Australian Mining Council (Dickson, ACT 1990).

sionals are employed to ensure compliance goals are achieved as well as to investigate means for waste minimization and energy efficiency.⁵⁴

Environmental auditing practices are another part of self-regulation. The International Chamber of Commerce defines the environmental audit as "a management tool for comprising a systematic, documented, periodic and objective evaluation of how well environmental organization management and equipment are performing."⁵⁵ The corporate environmental audit is now a well accepted tool for measuring environmental performance.⁵⁶

Consumer interest has promoted improvement in environmental performance through so-called eco-labelling. To attach the "eco-logo" to a product, the company must submit to a regular and systematic audit of its activities and its impact on the environment. The EEC is paying particular attention to this development.⁵⁷

Surrogate regulation can be used effectively to reinforce and support self-regulation, and its form varies widely. Stock exchange rules require the disclosure of environmental litigation where a governmental authority is a party to the litigation, and monetary sanctions will result in \$100,000 or more, exclusive of interest and costs.⁵⁸ Lenders and insurers routinely use environmental audits as part of risk reduction programs for new and established customers. Warranties between parties to sale and purchase agreements for assets or company shares are normally included in such transactions.

Although environmental performance is subordinate to other commercial issues in these situations, compliance is reinforced without involving a regulatory authority. Often, a breach of these provisions may have repercussions, principally in terms of access to capital, that are regarded equally if not more seriously than sanctions which can be imposed by regulatory officials.

Administrative responsibility is being progressively delegated to local governments.⁵⁹ The primary justification for this is that local officials are closest to the plants and stations whose operations impact the environment. Those officials should, therefore, be responsible for inspection and compliance. This creates potential conflicts, particularly where the local government furnishes water and waste disposal services. Additionally, local governments are often under-resourced for this role. Local control seems

54. Forrest W. Frazier, *Comprehensive Environmental Training Program for the Production of Oil and Gas Industry*, Proceedings of the First International Symposium on Oil and Gas Exploration and Production Waste Management Practices.

55. International Chamber of Commerce, *The ICC Guide to Effective Environmental Auditing*, Publication No. 483 (Paris 1991).

56. Brian A. Martinson, *Corporate Environmental Audit Programmes: Emerging Trends, Standards and Public Policies*, IBA Section on Energy & Natural Resources Law, *supra* note 3, at 489.

57. European Commission Information, *Commission Proposes a Voluntary Community Environmental Audit Scheme for Industry* (Brussels Dec. 19, 1981).

58. SEC Regulation S-K, 17 C.F. R. § 229.10 (1992).

59. JOHN PUGH SMITH, *THE LOCAL AUTHORITY AS A REGULATOR OF POLLUTION IN THE 1990's*, 103-09 (1991).

to have the most to offer as an effective monitor of third-party certification and industry self-regulation. The OECD has forecast that "with the development of international dimensions in both trade and environmental issues, it appears that the potential for conflicts in the 1990s between trade and environment objectives is on the rise."⁶⁰

These policies could come under close scrutiny under the GATT Agreement in Technical Barriers to Trade. Article XX of the Agreement on Technical Barriers to Trade recognizes the right of ratifying nations to adopt trade measures "necessary to protect human, animal, and plant life and health" as well as those "relating to the conservation of natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption." Such measures must not result in "arbitrary or unjustifiable discrimination between countries where the same conditions prevail," and "they must not represent a restriction on international trade."⁶¹

There has been a rising concern that countries with low standards of environmental protection have unfair advantages in international trade. Vice President Al Gore has advocated the incorporation of standards of environmental responsibility in the international treaties and trade laws.⁶² The Clinton Administration has stated it will not send the North American Free Trade Agreement to Congress unless collateral agreements are reached on environmental controls and labor conditions.⁶³ There are examples of environmental controls that have affected international trade. When the United States announced its intention, after the *Exxon Valdez* spill, to require all imported oil to be shipped in double-hulled vessels, Shell discontinued bringing crude into the United States. Cross-border trade of natural gas in both Europe and the United States is being aided by the environmental benefits associated with the displacement of other fuels.

E. Trade Triads

The third force to be examined is the effect the formation of regional trading blocs has on the energy industry. Though the liberalization of international trade has been on the industry's agenda for as long as, if not longer than, either privatization or environmental protection, it is the least fully formed of the three. Part of the explanation could be that the International Trade Organization, which under GATT was intended to judge international trade disputes and enforce decisions, was never created.

Open and stable markets within and between nations has been the goal of the General Agreement on Tariffs and Trade since its establishment at the Bretton-Wood Conference in 1948. The Uruguay Round of the

60. OECD, *The State of the Environment* (Paris 1991).

61. GATT Information Office, Geneva (undated).

62. AL GORE, *EARTH IN THE BALANCE* 343 (1992).

63. On June 30, 1993 the U.S. District Court for the District of Columbia issued an opinion in *Public Citizen, Sierra Club and Friends of the Earth v. Off. of the U.S. Trade Representative*, 822 F. Supp. 21 (D.D.C. 1993), ordering that an environmental impact statement must be prepared on NAFTA.

GATT, which is to provide for the gradual reduction on trade barriers for agricultural commodities and services, has failed to be concluded by 1990 as scheduled. One distinguished commentator, Lester Thurow, Dean of MIT's Sloan School of Management, has declared that the "GATT-Bretton Woods trading system is dead" — a victim of its own success.⁶⁴ Compelling evidence in support of this proposition can be found in a recent report issued by the United Nations Commission on Transnational Corporations which described the emergence of three major trading blocs.⁶⁵ The configuration of these blocs was heavily influenced by global companies; these companies shifted from a business strategy of exports from the home country to investments in plant and equipment in other countries in order to create pan-European or pan-American firms. The three triads traced by the pattern of direct foreign investment by transnational corporations are: the United States, the European Community, and Japan. Japanese companies in particular appear to have pursued an approach of forming "self-contained, regionally sustainable networks of affiliates in each of the triad members."⁶⁶

Special bilateral arrangements such as the North America Free Trade Agreement (NAFTA) and European Free Trade Association (EFTA), also reinforce the mentality of regional trading blocs. There has even been the suggestion by the former United States Ambassador to Japan, Mike Mansfield, that there be a United States-Japanese common market to counter the rise of the "House of Europe."⁶⁷

Thus far, the effect upon the energy industry, at least when viewed from within one of the triads, has been positive. Primarily, this is because new opportunities have been created for cross-border trade in natural gas and electricity.⁶⁸ The Free Trade Agreement between the United States and Canada, which became effective on January 1, 1988, has facilitated the use of Canadian natural gas by California utilities.⁶⁹ Similarly, EFTA has created a consolidated market for natural gas in Eastern Europe.⁷⁰ The trade in electricity has been less momentous. Integration of national grids and transmission costs are still being sorted out.

Crude oil remains the prime commodity in international energy trade.⁷¹ The price of West Texas Intermediate futures are among the handful of the most vital and carefully-monitored indicators of the condition of the world economy. Seemingly, as a global commodity, crude oil tran-

64. LESTER C. THUROW, *HEAD TO HEAD* 65 (1992).

65. United Nations, Commission on Transnational Corporations, *RECENT DEVELOPMENTS RELATED TO TRANSNATIONAL CORPORATIONS AND INTERNATIONAL ECONOMIC RELATIONS: THE TRIAD IN DIRECT FOREIGN INVESTMENT*, E/C 10/1991/2 (1990).

66. *Id.*

67. THUROW, *supra* note 64, at 84.

68. *See generally* Topic 7: *Cross Border Trading of Electricity and Gas*, *supra* note 3, at 503-638.

69. The California Public Utility Commission has ordered Pacific Gas and Electric to provide natural gas aggregators with access to Canadian surplus. Resolution No. G-2967 (Cal. Public Util. Comm'n 1991).

70. *Cross Border Trading in Electricity and Gas*, *supra* note 68.

71. Palmer, *supra* note 21.

scends the rise of regional trading spheres. This should continue to be the case for several reasons.

First, the three triad blocs are all net oil importers.⁷² Japan in particular has no indigenous production of natural gas.⁷³ This means that oil stocks must be secured through international trade. Secondly, the trading firms are largely domestic affiliates of multinational, integrated petroleum companies, which are not closely identified with regional trade agendas. Thirdly, the operation of modern trading exchanges means that divine laws of supply and demand are revealed instantaneously to anyone, at least if they have paid their subscriptions to an on-line service.

The point at which the question about oil marketing starts to get interesting is the way in which transnational corporations will orient their investment in countries which lie outside one of the triad spheres. The opportunity seems obvious. Many of the world's largest petroleum companies (Aramco, Pertamina, NNPC, Petronas, and Petrobas) are located in countries outside the three tri-polar trading blocs. As the tide of privatization swells, so too will these firms' desire for joint ventures and commercial alliances with companies that have management experience, access to technology, and capital markets.

II. CONCLUSION

Since the oil price shocks of the 1970s, international energy policies have been preoccupied with supply considerations. Today, energy strategy is subject to a broader focus. There is a clear recognition of the complex interactions that take place between supply sources, global security, trade, institutional reforms, and a sustainable natural environment. Privatization, environmental sustainability, and multi-lateral trading are rising to the top of this agenda because of their direct effect on the future of the international energy industry.

As formerly state-owned enterprises increasingly follow the commercial practices of firms rooted in market economics, new opportunities for trade and competition will be created. Now is the time to begin to build business relationships with these entities as traditional notions of competition are being overtaken by an increased emphasis on strategic alliances, collective capitalism, and the communitarian companies which the Japanese call "Keiretsu."

Sustainable development has been criticized as being all things to all people. Regardless of how it is articulated, this principle is becoming the cornerstone for the application of management programs for harmonizing economic development with the prevention of environmental degradation. Applying sustainable use to the development of depletable energy resources is a major challenge intellectually and practically. However,

72. Using 1989-90 statistics, the United States produced 2.6 billion barrels against consumption of 4.9 billion barrels while Japan produced 4 million barrels compared with consumption of 1.3 billion barrels. BRITANNICA WORLD DATA 806-09 (1992).

73. *Id.* at 809.

companies that do not confront this challenge successfully are likely to be denied access to the resource base which is the one rein that national governments are not releasing in the privatization process.

The emphasis on multilateral regional trade has been beneficial to those segments of the energy industry which are highly dependent upon network utility systems such as electricity and natural gas. Reduction of trade barriers in combination with decontrol and deregulation (other forms of privatization) has added additional efficiencies through the liberalization of cross-border trading. Crude oil is likely to remain unaffected by this pattern of tri-polar trade due to its established role as a global commodity and the fact that all three regions are substantially dependent upon imports.

Without detracting from the fact that, as practitioners, we need to be *au fait* with the leading edge of this dynamic area of law, it is equally useful to see that larger and, at times, subtler and more powerful forces are at work. Just as the wave that breaks on some far shore is determined by the wind patterns and reach of ocean travelled, if we fail to identify and take account of the momentum generated by such forces, our lot will not be to ride the crest of new demands but to become captive to the undertow and swept away from the opportunity to be of service. Hang-ten!