

# **DEVELOPING A LEGAL FRAMEWORK FOR THE EXPLORATION AND EXPLOITATION OF METHANE HYDRATES IN THE NORTHWEST TERRITORIES AND OFFSHORE CANADA**

## **ANNOTATED BIBLIOGRAPHY**

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This web page contains selected sources of information, relevant to my LL.M. thesis research at the University of Calgary (U of C). My research seeks to develop a comprehensive legal framework for the production of methane (gas) hydrates in the Northwest Territories and Offshore Canada.

The web page, though broadly divided into primary and secondary sources, annotation is only provided in respect of the secondary sources. The annotated secondary sources are further classified into four sections. All the sections, except section four, contain one or more parts on textbooks and articles.

Section one contains mainly scientific materials, which provide background information on the meaning, formation processes, distinguishing features and suggested production methods of gas hydrates. Section two has literatures which provide general background information about the oil and gas industry, particularly as it relates to Canada. Section three is devoted to legal literature on the legal regime of oil and gas, mainly in Canada, while section four contains useful links with relevant information on regulatory and policy issues on oil and gas in Canada. This annotated bibliography is a work in progress. It is, therefore, not by any means exhaustive.

## **PRIMARY SOURCES**

### **Legislation**

*Canada Environmental Assessment Act*, R.S.C., 1992, c. 37.

*Canada Petroleum Resources Act*, R.S.C, 1985, (2nd Supp.), c. 36.

*Oil and Gas Production Conservation Act*, R.S.C, 1985, c. O-7; 1992, c. 35.

### **Regulations**

*Drilling Regulations* SOR/79-82.

*Production and Conservation Regulations* SOR/90-791.

## **Judicial decision**

*Re Ownership of Offshore Mineral Rights* [1967] S.C.R. 792, 62.

## **International Treaties**

*United Nations Convention on the Law of the Sea*, 10 December, 1982, 1833 U.N.T.S.3, 21 I.L.M. 1261 (entered into force 16 November 1994).

*United Nation Convention on the Continental Shelf*, 29 April, 1958, 499 U.N.T.S.311, C.T.S. 1970/4 (entered into force on 10 June 1964).

*United Nation Convention for the Prevention of Pollution of the Sea by Oil*, 12 May, 1954, 327 U.N.T.S .3, C.T.S. 1958/31 (entered into force on 20 January 1978).

*United Nation on Civil Liability for Oil Pollution Damages*, 29 November, 1969, 14097 U.N.T.S.355 (entered into force on 14 June 1981).

## **SECONDARY SOURCES**

### **SECTION ONE: BACKGROUND INFORMATION ON GAS HYDRATES**

#### **BOOKS**

**Makogon, Yuri. *Hydrate of Natural Gas*, trans. by Ceslewicz, W.J (Pulsa: Penwell Publishing Company, 1981).**

The author is a visiting Professor and Head of the Gas Hydrate Program at Texas A&M University. He holds MS and BS degrees from the Moscow Oil-Gas Gubkin Institute and a Ph.D. from the Moscow Central Gas Research Institute. On the other hand, the translator, a Professor Emeritus of Physics at the Colorado School of Mines, holds a Ph.D. from University of Princeton. The book gives a detailed, but simple analysis of natural gas hydrates. I will find Chapters 5 and 6, which examine the principle of gas extraction from hydrates and the uses of gas hydrates, respectively, very useful to my thesis.

**Williams, Howard & Charles Meyer. *Manual of Oil and Gas Terms*, 12<sup>th</sup> ed. by Patrick Martins & Bruce Kramer (New York: Mathew Bender Inc., 2003).**

The editors are both Professor of Laws with many years of teaching in Petroleum and Natural Resources Law. The book is a collection of meaning of words and phrases that are frequently used in oil and gas matters. It defines with brevity and accuracy some legal terms in a manner that is comprehensible by even non lawyers. This will book will be useful in defining terms throughout the thesis.

## ARTICLES

**Canadian Association and Petroleum Producers Safety Committee, CAPP Guidelines for the Prevention and Safe Handling of Hydrates < <http://www.capp.ca/getdoc.aspx?DocId=67103&DT=NTV> >.**

The article explains the regulations, nature, formation process and handling of hydrates. It states that water, being a loosely formed group of molecules, has spaces between them which allow light gas, such as methane, to penetrate. Though this piece deals specifically with a kind of hydrate, a form of ice plugs in which methane hydrate can be found, it will, however, be useful to my thesis in explaining how methane hydrates differ from other conventional natural gases.

**Collett, Timothy S. “Energy Resource Potential of Natural Gas Hydrates,” (2002) 86 American Association of Petroleum Geologists 1971.**

The author, who works with the United State of America Geological Survey as a research geologist, holds a Ph.D. in Geology from the Colorado School of Mines. He was an instructor in the Department of Petroleum Engineering, University of Alaska. He has been project chief of the North Slope of Alaska Gas Hydrate Project since 1985. He has authored several books and articles on mineral resources. In this article, he explains the process of formation of methane hydrate, its physical features and how it can be explored and exploited. He also identifies the commercial importance of gas hydrate. The article is written in simple, non-scientific language that can easily be understood by someone that does not have science background. It will be useful for the Chapter I of my thesis, where I intend to describe the features of gas hydrate, formation process and method of exploration and exploitation.

**Grauls, D. “Gas Hydrates: Importance and Applications in Petroleum Exploration” (2001) 18 Marine and Petroleum Geology 519.**

Grauls is a geologist with ELF Exploration and Production Company in France. He itemizes the various features of gas hydrates as distinct from other forms of hydrocarbons. Unlike other articles examined above, he also identifies the key exploration difficulty of methane hydrates. It will be useful in explaining the likely exploration difficulty that might necessitate the need for regulatory and policy changes. The article contains a lot of scientific terms which may pose reading difficulty to non-scientists.

**Iseux, J-C. “Gas Hydrates: Occurrence, Production, and Economics” (Paper delivered at the Production Operations Symposium held in Oklahoma City, Oklahoma, April 7-9, 1991) [Unpublished].**

The author, a member of the Society of Petroleum Engineers, is a consultant at the Institute of Geophysics of Paris. He has authored many articles. In this article, the author considers the various methods of extracting natural gas. The article concludes with the economic importance of natural gas production from gas hydrates, assuming a satisfactory method of hydrates recovery is achieved.

**Kvenvolden, Keith. “Gas Hydrates-- Geological Perspective and Global Change” (1993)  
31:2 Reviews of Geophysics 173.**

The author graduated in 1952 as a geophysical engineer from Colorado School of Mines. He is currently the Emeritus Organic Geochemist for the United States Geological Survey. He has authored more than 500 papers and abstracts dealing with a variety of subjects in organic geochemistry, often related to fossil-fuel energy, and the environment. He earned his M.Sc. and Ph.D. degrees in Geology from Stanford University. He is a leading authority on the existence and character of naturally occurring methane hydrates. In this article, the author clearly explains the three important aspects of gas hydrates: fossil fuel resource potential, their roles as marine geohazard, and their effects on global climate change. Although the author focuses more on the last two aspects, which are the negative aspects of gas hydrates, the article will, nonetheless, be useful in understanding the negative effects of gas hydrates that could necessitate a policy and regulatory change.

**Majorowicz, J.A. & Osadetz, K.G. “Gas Hydrates Distribution and Volume in Canada”  
(2001) 85:7 American Association of Petroleum Geologist 1211.**

Majorowicz bagged his M.sc. and Ph.D. in 1970 and 1976 respectively, from the University of Warsaw. He worked with the Department of Physics, University of Alberta (U of A) and has over 50 published scientific articles. K.A. Osadetz, on the other hand, bagged his B.sc. and M.sc. degrees in 1978 and 1993, respectively, from the University of Toronto. He is the head of the Energy and Environment Subdivision of the Geological Survey of Canada’s Calgary office. This article summarizes the nature of formation, structure and the geographical distribution of gas hydrates in Canada. It is written in scientific language and, as such, may pose difficulty to readers that do not have science background; nevertheless, I will find it useful in writing Chapter I of my thesis which seeks to provide background information on gas hydrates.

**Mehran, Pooladi-Darvish. “Gas Production from Hydrate Reservoirs and Its Modeling”  
(2004) Journal of Petroleum Technology 65.**

Currently a Professor in the Chemical and Petroleum Engineering Department, U of C, Mehran bagged his B.Sc. from the Amir Kabir University of Technology, Iran in 1989. He obtained his M.sc. and Ph.D. from University of Petroleum Industry, Iran and U of A in 1992 and 1995, respectively. The paper reviews the potential of gas hydrate as a source of energy of the future; it further proposes several options or models for exploring gas hydrates. It, however, fails to recommend any of the options as the most suitable and why it should be so.

**OECD/IEA, “Non-Conventional Gas Resources and Methane Hydrates” in *Resources to Reserves: Oil and Gas Technologies for the Energy Markets of the Future*, Paris: OECD/IEA, 2005) 85.**

This paper outlines the differences in the formation process, as well as the physical and chemical composition, of gas hydrates and other forms of non conventional gas like coal bed methane and tight gas. It further highlights the role of gas hydrates in future energy markets. It will also be useful in giving background information on gas hydrates in Chapter I of my thesis.

## **SECTION 2: GENERAL BACKGROUND INFORMATION ON THE OIL AND GAS INDUSTRY**

### **TEXBOOKS**

**American Petroleum Institute, *A Primer of Oil and Gas Production* (Dallas: American Petroleum Institute, 1976).**

This book offers elementary understanding of the day-to-day workings of the oil and gas fields. It is written in simple and non-technical language.

**Member of Staff of Shell BP Group, *The Petroleum Handbook*, 3<sup>rd</sup> ed. (England: Balding and Mansell Ltd).**

This book gives an overview of the activities in the petroleum industry, with emphasis on the upstream sector. The Chapter I of the book, which deals with petroleum exploration, drilling, field development and production, and recovery of liquefied natural gas, will be very relevant to my thesis. The shortcoming of this book, however, lies in the fact that it may be a reflection of an experience that is peculiar to Shell BP, which may not necessarily represent the general practice in the industry. Also, the book is old and given the technological advancement in the petroleum industry, reliance on it must be with caution.

**Ron, Baker. *A Primer of Oil Well Drilling*, 6th ed. (Austin: Petroleum Extension Service, 2001).**

This book spelt out the whole gamut on the drilling of oil and gas well. Its uniqueness lies with the simplicity of its language, thus making its reading very easy for someone without a science background. It will be very useful in identifying the various difficulties likely to be encountered in the drilling of gas hydrate well.

### **ARTICLES**

**Ehrman, Brad. “Introduction to Exploration and Production Operations” (Lecture delivered at the Oil and Gas Short Course organized by Rocky Mountain Mineral Law Foundation at Westminster, Colorado, 19-23 October, 2009), [unpublished].**

The author holds a B.sc in Petroleum Engineering with distinction from the U of A and an MBA from Rice University. He is currently the Engineering Manager for Dorchester Minerals L.P, a Dallas-based oil and gas partnership. The author gives a very simple, but analytical detail of petroleum exploration and production operations.

**Cairns, Robert. “Natural Resources and Canadian Federalism: Decentralisation, Recurring Conflict, and Resolution” (1992) 22 *Journal of Federalism* 55.**

The author, an Associate Professor in the Department of Economics, McGill University has published many books and articles. He describes the constitutional division of Canadian natural resources and revenue between the federal government and the provinces from the perspectives

of Economics and Taxation. This article, unlike the others dealing with the same subject, does not consider the topic from a legal standpoint.

**Christiansen, Mark. “Legal Developments in 2007 Affecting the Oil and Gas Exploration and Production Industry” (2008) 45:1 Rocky Mountain Mineral Law Foundation Journal 147.**

The author is an attorney with the law firm of Crowe & Dunlevy, Oklahoma City, Oklahoma. The book offers a survey of the variety of legal developments, occurring between late 2006 and 2007 in the major oil and gas-producing states in the United States, that affect companies involved in the exploration for, and production of, oil and natural gas. Of particular importance is its review of the *Alaska Gasline Inducement Act* AS 43.90 et. seq., enacted to encourage gas production in Alaska state.

**Harrison, Rowland. “Jurisdiction Over the Canadian Offshore: A Sea of Confusion” (1979) 17:3 Osgoode Hall L.J.**

The author, a quondam Professor of Law, U of C, was the Executive Director of the Canadian Institute of Resources Law. The author examines the *Re Ownership of Offshore Mineral Rights* [1967] S.C.R. 792, 62 the case, where the Supreme Court of Canada held that mineral resources lying offshore of Canada belong to the federal government and not the provinces. He reviews the English case of *R V Keyn* [1876] 2 Ex. D. 63, relied on by the Supreme Court of Canada in reaching its decision in *Re Ownership of Offshore Mineral Rights*. This article, like the previously reviewed articles, will be useful to my thesis in establishing that gas hydrates lying offshore of Canada are within the control and management of the federal government and not the provinces.

**Head, Ivan L. “The Canadian Offshore Mineral Reference: The Application of International law to a Federal Constitution” (1968) 18:2 U.T.L.J. 131.**

The author was a Queens Counsel, Professor of Law at the U of A, and a Legal Assistant and foreign policy adviser to former Prime Minister of Canada, Pierre Trudeau. The article traces the history of the constitutional disputes between the Federal Government of Canada and the coastal Provinces over the ownership of offshore mineral resources. It analyses the landmark decision of the Supreme Court of Canada in *Re Ownership of Offshore Mineral Rights* [1967] S.C.R. 792, 62, regarding the dispute between the Federal Government of Canada and the province of British Columbia over the ownership of the mineral resources lying offshore of that province. The court held in that case, in its advisory capacity, that ownership of offshore resources vest in the Federal Government. This article will be of importance to my thesis, as it provides adequate background regarding disputes over offshore mineral resources. The article is, however, old and most of the views expressed in it might have been overtaken by events.

**Lagoni, Rainer. “Oil and Gas Deposits Across National Frontiers” (1979) 73:2 A.J.I.L. 215.**

The author is currently a Professor and Director of the Institute of the Law of the Sea and Maritime Law, University of Hamburg, Germany. He was formerly of the Institute of International Law, University of Kiel, Germany. The author examines the legal regime

governing the exploration and exploitation of mineral deposits lying offshore of coastal states. He considers the maritime zones as well as the nature of rights that a coastal state may exercise in each of the zone. This scholarly writing will particularly be useful for my thesis because gas hydrates are mainly found in the offshore zone, an area which constitutes the focus of the article.

### **SECTION THREE: LEGAL LITERATURE ON THE LEGAL REGIME OF OIL AND GAS.**

#### **TEXTBOOKS**

**Bankes, Nigel and Bennett Jones Verchere. *Canadian Oil & Gas, 2nd ed.* (LexisNexis Canada Inc.) 1993 – 2007.**

Nigel Bankes is a Professor of Law and Chair of Natural Resources at the Faculty of Law, U of C. Professor Bankes, who bagged his LL.M from the University of British Columbia, is a member of the Alberta Bar. This loose-leaf covers every aspect of Canadian oil and gas law and gives a comprehensive commentary on legislation and case law. The commentary in this book will be useful for my Chapter II where I will be reviewing some relevant legislation.

**Lucas, Alastair & Constance Hunt. *Oil and Gas Law in Canada* (Calgary: Carswell, 1990).**

Alastair Lucas is a Queen Counsel, Professor of Law and the current Dean of the Faculty of Law, U of C. He bagged his B.A and LL.B. from the U of A, and LL.M. from the University of British Columbia. Constance Hunt, on the other hand, was a Professor and former Dean of the Faculty of Law, U of C. She received her B.A and LL.B from University of Saskatchewan. In 1976, she bagged her LL.M from Harvard University. She is currently a judge of the Court of Appeal, Nunavut. This book gives a general overview of the legal and policy framework for oil and gas operation in Canada. Its Chapters I, III and VII, which deal with oil and gas interest in Canada, petroleum management on federal lands, and governmental regulation of petroleum exploration, development and production, respectively, will be useful for my thesis. Although the book is old and some of the laws it considered have been amended and/or replaced, I will still place reliance on it, but with caution and necessary modification. This is because it is the only book that provides a broad overview of Canadian oil and gas law.

**Lowe, John. *Oil and Gas Law in a Nutshell, 5th ed.* (United States of America: Thomson Reuters, 2009).**

The author is a graduate of Harvard Law School and a member of the bars of Texas, Oklahoma, and Ohio. He is a Professor of Energy Law at Southern Methodist University. He is also an honorary lecturer and principal researcher at Centre for Energy, Mineral Law and Policy, University of Dundee. He is also a Senior Fellow of the Faculty of Law of the University Melbourne. Professor Lowe is currently an International Legal Advisor for Iraq oil issues in the Commercial Law Development Program of the U. S. Department of Commerce.

The book provides one of the most simplified but detailed overview of international and domestic legal framework for oil and gas production. In spite of its international outlook, the shortcomings of this book lie in the fact that its focus is on the domestic laws of the United States.

**Smith, Ernest E. et al., *International Petroleum Transactions*, 2nd ed. (Denver: Rocky Mountain Mineral Law Foundation, 2000).**

All the five authors of this book are law Professors in various universities across the United States. The book provides an up to date comparative analysis of the different domestic and international laws governing petroleum activities across the world. Chapter 12 of the book, which, deals with Canadian regulation of transboundary natural gas transaction will be useful to my thesis.

## **ARTICLES**

**A.L.C. de Mestral, “The Law Applicable to the Canadian East-Coast Offshore” (1983) 21:1 Alta. L. Rev. 63.**

The author, a Professor of Law at the McGill University, Canada examines the uncertainty as to jurisdiction over offshore oil and gas exploration in Canada. He considers the models adopted in the United States, Australia, United Kingdom and New Zealand for resolving the dispute over the control of offshore mineral resources in those countries and recommends that the ownership of offshore mineral resources be vested in the Federal Government of Canada. It will also be useful for the Chapter II of my thesis, where I will be reviewing some of the legislation that regulates the offshore areas.

**Black, Alexander. “Jurisdiction Over Petroleum Operations in Canada” (1986) 35:2 I.C.L.Q. 446.**

The author examines the distribution of ownership of petroleum resources among the federal government, the provincial governments and individuals by tracing the history of the distribution of public resources back to the Constitution Act of 1867. It also provides a detailed analysis of the ownership of mineral resources offshore of Canada. This article is old and a great deal of the author’s opinions has been overtaken by events, it will be useful in understanding the basis of the current distribution of resources between the levels of government in Canada.

**Quesnel, Raymond E. “A Review of the *Canada Petroleum Resources Act* and the *Canada Oil and Gas Operations Act* as the Legal Framework for Future Development in the Northern Territories” (2002-2003) 40 Alta. L. Rev. 83.**

The author, Raymond Quesnel, is a Partner in the law firm of McCarthy Tetrault, Calgary. The author examines the *Canada Petroleum Resources Act* R.S.C, 1985, (2nd Supp.), c. 36 and *Canada Oil and Gas Operations Act* R.S.C, 1985, c.O-7 which are the core legislation governing oil and gas activities in the offshore and Northern Canada, core areas where gas hydrate has been discovered in commercial quantity. He also evaluates the basis on which exploration rights are granted, the royalty regime and the project approval process. However, in the author analysis

of over fourteen year of the existence of these statutes, he failed to make reference to any judicial decision illustrating the application of these statutes in practice.

**Taft, George. “Regulatory and Permitting Environment for Gas Hydrates” in Michael D. Max et al. eds., *Economic Geology of Natural Gas Hydrate* (Netherlands: Springer, 2006) 267.**

The author is a United State-based legal practitioner with wide experience in mineral resources law. The article gives a description of the domestic and international legal framework for the exploration for, and production of gas hydrates. It analyses the various maritime zones of the world and states the nature of rights that a coastal state may exercise over the mineral resources of each maritime zone. However, the article focused mainly on the international legal framework for gas hydrate production, thus failing to provide a balance between the domestic and international legal frameworks for gas hydrates production. This article will be very useful for Chapter V of my thesis, where I will discuss the impact of International Conventions on the production of methane hydrate.

#### **SECTION FOUR: USEFUL LINKS**

**National Energy Board** is the Canadian government agency vested with the regulation of oil and gas operation in the federally-controlled lands. The agency websites provide up to date information on the regulatory and government policy on natural gas. See online: National Energy Board <<http://www.neb.gc.ca/clf-nsi/rcmmn/srch/srchresult-eng.asp>>.

**National Resources Canada** is the government agency responsible for ensuring sustainable development of Canada natural resources and its official websites publishes government policy on environmental issues. See online: National Resources Canada <[http://oee.nrcan.gc.ca/regulations/home\\_page.cfm?attr=4](http://oee.nrcan.gc.ca/regulations/home_page.cfm?attr=4)>.

**Canadian Society of Unconventional Gas** is a nonprofit organization that advocates for the use and development of unconventional gas in Canada. Its websites provides up to date information on regulatory and policy framework for unconventional gas in Canada. See online: Canadian Society of Unconventional Gas <<http://www.csug.ca>>.

For the necessary guide that is required for oil, and natural gas exploration and production in Canada. See online: Canadian Government Regulatory Agencies and the Canadian Association of Petroleum Producer (March 2009) <<http://www.oilandgasguide.com>>. This link will be useful for the Chapter II of my thesis where I will be assessing the existing legal regime of natural gas in Canada.

For a detailed and up to date collection of the meaning of words and phrases that are used in oil and gas matters. See online: Schlumberger Oilfield Glossary (2009) <<http://www.glossary.oilfield.slb.com/default.cfm>>.

Annotated Bibliography: The Meaning of the Duty to Accommodate in Aboriginal Law and Implications for Oil and Gas Development in Canada

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The following annotated bibliography is part of the research for my LL.M. major paper. The thesis of my major paper deals with the duty to accommodate in Aboriginal law. I intend through this research to summarize the existing case law and state the duty to accommodate as succinctly as possible. I will examine other areas of law that have addressed the concept of accommodation and determine whether the legal principles found can be applied to the duty to accommodate in Aboriginal law to provide guidance to industry proponents who are proposing oil and gas projects that may impact Aboriginal rights.

PRIMARY MATERIAL: LEGISLATION

*Indian Act*, R.S.C. 1985, c. I-5.

*Indian Oil and Gas Act*, R.S.C. 1985, c. I-7.

PRIMARY MATERIAL: JURISPRUDENCE

*Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73, 245 D.L.R. (4th) 33.

SECONDARY MATERIAL: BOOKS

Borrows, John J. & Leonard I. Rotman. *Aboriginal Legal Issues: Cases, Materials & Commentary*, 3rd. ed. (Markham, Ont.: LexisNexis Canada Inc, 2007).

Imai, Shin. *Aboriginal Law handbook*, 3d. ed. (Toronto: Thomson Canada Ltd., 2008).

SECONDARY MATERIAL: ARTICLES

Bois, Charles & Sarah Hansen. "Regulatory and Legal Issues Respecting Coalbed Methane Development in British Columbia" (2007-2008) 45 Alta. L. Rev. 631.

Both authors are lawyers who were practicing in British Columbia (BC) at the time this article was written. The article examines the regulatory and legal issues surrounding coalbed methane (CBM) development in BC, and was intended for industry proponents who may be considering a CBM project there. The article is useful in that it discusses the perception in industry that oil and gas development in BC is impossible given the large number of unresolved First Nation claims. The authors point out that this is not the case, but significant consultation and accommodation is required and industry must be prepared to negotiate agreements that accommodate First Nations. The article does not discuss the legal background of consultation and accommodation or point

out that it is also the Crown's duty to fulfill. I intend to use the article to support the proposition that proponents must be prepared to accommodate First Nations when there are unsettled First Nation claims.

Christie, Gordon. "Developing Case Law: The Future of Consultation and Accommodation" (2006) 39 U.B.C.L. Rev. 139.

The author is an associate professor at the University of British Columbia and writes in the area of First Nations and Canadian Law. In this paper, Professor Christie provides the historical development of the duty to consult and attempts to predict how the duty will unfold "on the ground." At times this article can be wordy but it does an excellent job of explaining the development of the law by arranging the case law into what the author refers to as four epochs in the history of the development of the duty to consult. At one point the author provides a critique of the law and argues that accommodating works to "push and pull Aboriginal title holders along an assimilative path" (para. 44). The author also provides an analogy to describe the relationship that exists between First Nations and the dominant culture (paras 50-56). I will use this article for its critiques of the law of the duty to accommodate and that unfairness that may result in its application.

Fogarassy, Tony & KayLynn Litton. "Consultation with Aboriginal Peoples: Impacts on the Petroleum Industry" (2004-2005) 42 Alta. L. Rev. 41.

Written by practitioners, the article gives a good background to the spectrum of Aboriginal rights as well as the justification for the infringement of Aboriginal and treaty rights. The article was published before the Supreme Court of Canada decided *Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73 and therefore the authors' discussion of the petroleum industry's duty to consult is outdated. The article discusses four sources of the duty of consultation including Administrative law, Statutory, Constitutional and Equity. The authors indicate that "the duty of accommodation appears on the one hand to be a free standing duty, while in the other; it is a necessary part of the duty of consultation" (p. 67). This statement reiterates my point that the duty to accommodate is not a well developed area of law. Although the court in the *Haida* decision has said it is a separate duty, much of the confusion still remains.

Isaac, Thomas & Anthony Knox. "Canadian Aboriginal Law: Creating Certainty in Resource Development" (2004) 53 U.N.B.L.J. 3.

Both of the authors are practitioners in British Columbia. In this particular article, the authors outline the Crown's duty to consult with Aboriginal peoples. There is a brief discussion of accommodation in relation to consultation. The authors' state "appropriate accommodation is circumstance driven along with the rest of the consultation process" (p. 21). The article explains that Impact and Benefit Agreements (IBAs) between First Nations and proponents have become standard practice in order to address the impacts on Aboriginal communities. The authors point out, IBAs can increasingly form an integral part of Crown consultations, although the authors remain silent as to whether they may also be used to satisfy the need for accommodation.

\_\_\_\_\_. “The Crown’s Duty to Consult Aboriginal People” (2003-2004) 41 Alta. L. Rev. 49.

This article includes no discussion of the duty to accommodate which is likely because it was written prior to the Supreme Court of Canada’s decision in *Haida*. The authors argue that the duty to consult can be broken down into two administrative law principles, the duty to provide fair process and the duty to provide a fair decision. The article is most useful for its explanation of procedural fairness and outlining how the five principles identified in *Baker v. Canada (Minister of Citizenship and Immigration)*, [1999] 2 S.C.R. 817 may be applicable in determining appropriate procedures to fulfill the Crown’s duty to consult. This approach should be contrasted with the writing of Verónica Potes (see “The Duty to Accommodate Aboriginal Peoples Rights: Substantive Consultation?” (2006) 17 J. Envtl. L. & Prac. 27.) who suggests that it is inappropriate to view the duty to consult in relation to administrative law principles. Lastly the article mentions the corresponding duty of Aboriginal people not to frustrate the consultation process.

McNeil, Kent. “Aboriginal Rights, Resource Development, and the Source of the Provincial Duty to Consult in Haida Nation and Taku River” (2005) 29 S.C.L.R. (2d) 447.

Professor Kent McNeil is a well known academic who writes in the area of Aboriginal law. This article is a strongly stated critique of the Supreme Court of Canada’s reasoning in the *Haida* decision. The author makes the argument that only the federal government should have a duty to consult with First Nations in relation to resource development (p. 448). This is because, as the author argues in his paper, the provincial government likely does not have the capacity to extinguish Aboriginal title. Professor McNeil also states that provincial Crowns likely do not have the power to grant interests in lands inconsistent with Aboriginal title. The argument the author makes are well organized and persuasive. At the end of the paper the author cautions industry proponents who are relying on provincial authority to develop resources on lands subject to a claim for Aboriginal title, as the result may be that grants such as licences may be seen to be unlawful from the initial grant placing companies at great risk.

Mullan, David. “The Duty to Consult Aboriginal Peoples: The Canadian Example” (2009) 22 Can. J. Admin. L. & Prac. 107.

Professor Mullan presented this paper at the Victoria University of Wellington Conference: “Celebrating 60 Years of the Universal Declaration of Human Rights.” The author uses the administrative law concept of procedural fairness to discuss the duty to consult. He states that the minimum requirement under common law for procedural fairness is notice and he sees this as similar to the requirement of consultation and accommodation when First Nation claims are weak. The author acknowledges that the obligations under the duty to consult doctrine are likely more generous than those required under administrative law. This is a major critique of using administrative law principles in discussing the duty to consult and accommodate. I will use this article for its discussion regarding the nature of accommodation and the relationship of accommodation to administrative law principles.

Potes, Verónica. "The Duty to Accommodate Aboriginal Peoples Rights: Substantive Consultation?" (2006) 17 J. Envtl. L. & Prac. 27.

The author was a graduate student at the Faculty of Law at the University of Calgary when this article was written. The author echoes others in that she is concerned that accommodation may become an assimilationist tool depending on how high the level of accommodation is set. (See Gordon Christie, "Developing Case Law: The Future of Consultation and Accommodation" (2006) 39 U.B.C.L. Rev. 139.). The author states that there are two main approaches to the duty to accommodate: the "procedural approach" and the "purposive approach." The former is concerned with the functionality of the duty in assisting the Crown in its decision making. The latter she suggests may be able to foster actual reconciliation between the interests of First Nations and the dominant society in Canada (p. 34). The author argues that the purposive approach to accommodation should be followed rather than using administrative law to characterize the emerging duty.

Pothier, Dianne. "How Did We Get Here? Setting the Standard for the Duty to Accommodate" (2009) 59 U.N.B.L.J. 95.

This paper is a revised version of a paper prepared for an Insight information conference on Advanced Issues in Duty to Accommodate in Halifax, Nova Scotia in 2008. Dianne Pothier is a professor of law at Dalhousie University, and researches human rights law and disability issues. The paper discusses the duty to accommodate in human rights law. She states that currently accommodation is exercised as an ad-hoc process "involving only after-the-fact tinkering." (p. 95). The author argues that rather than ad hoc accommodation there should be systemic accommodation what would anticipate that need for accommodation from the outset. I am interested in the concept of undue hardship as a limit to the duty to accommodate in human rights law, and will use this paper to develop possible application for the duty to accommodate in Aboriginal law.

Reid, David & Stephanie Hickman. "Aboriginal Rights and the Atlantic Canada Petroleum Industry" (2007) 30 Dal. L. J. 383.

Both authors are practitioners at a major Atlantic law firm. The paper contains a historical overview of Aboriginal settlement and land use in Atlantic Canada and the major treaties of the area are discussed. This is important because unlike the numbered treaties signed in the west, the Maritime treaties contain no cessation or release of First Nation rights. The article is also helpful in that it discusses relevant case law that has considered whether the duty to consult may extend to private lands. Using this foundation I will see if the authors' arguments can extend to the duty to accommodate as there is no direct mention of accommodation in the article. The authors state it is in the proponents' best interest to take a proactive role in consulting with First Nations because there is a high degree of the possibility of a successful claim of Aboriginal title in the Maritime region. This statement has implications for proponents hoping to develop an on-shore oil and gas project in the Maritimes.

Treacy, Heather L. *et al.* “The Current State of the Law in Canada on Crown Obligations to Consult and Accommodate Aboriginal Interests in Resource Development” (2007) 44 Alta. L. Rev. 571.

The authors of this article are all lawyers at the same law firm in Calgary. The article is a good entry level article for a reader who may not be familiar with Canadian Aboriginal law as it provides an overview of the various Aboriginal interests including Métis rights. The article is also written for the “prudent proponent” who will want to avoid litigation risks, delays and increased costs of an oil and gas project. The authors, in point form, have identified the key principles on the duty to accommodate and consult as set out in the major decisions in Canada. This article will be relied on for its explanation of the regulatory consultation requirements in British Columbia, Alberta and Federally. The authors state that it remains unclear when the duty to accommodate is triggered and the specific legal requirements with respect to accommodation that may be required in the circumstance. The authors still provide some ideas of what should be done by proponents to set the stage for a long-term relationship.

#### SECONDARY MATERIAL: NON-ANNOTATED

Passelac-Ross, Monique M. & Verónica Potes, “Crown Consultation with Aboriginal Peoples in Oil Sands Development: Is it Adequate, Is it Legal?” online: Canadian Institute of Resources Law  
<http://dspace.ucalgary.ca/bitstream/1880/47190/1/OP19AboriginalOilsands.pdf>.

#### SECONDARY MATERIAL: INTERNET SITES

Aboriginal Canada Portal, online:  
<http://www.aboriginalcanada.gc.ca/acp/site.nsf/en/index.html>.

*Alberta’s Oil Sands: Resourceful, Responsible*, online: The Government of Alberta  
<http://environment.gov.ab.ca/info/library/7925.pdf>.

*Alberta’s First Nations Consultation Guideline on Land Management and Resources Development*, online: The Government of Alberta  
[http://www.aboriginal.alberta.ca/documents/First\\_Nations\\_and\\_Metis\\_Relations/First\\_Nations\\_Consultation\\_Guidelines\\_LM\\_RD.pdf](http://www.aboriginal.alberta.ca/documents/First_Nations_and_Metis_Relations/First_Nations_Consultation_Guidelines_LM_RD.pdf) >.

Indian Oil and Gas Canada online <http://www.iogc.gc.ca/bins/index.asp?lang=1>.

**UNIVERSITY OF CALGARY FACULTY OF LAW**

**THE RULE OF CAPTURE: DOES IT CROSS THE LINE?**

**LAW 703**

**PRELIMINARY BIBLIOGRAPHY**

**PREPARED BY CECILIA A. LOW  
2 December 2009**

**INTRODUCTION**

The proposed paper for which this preliminary bibliography was prepared will be a follow-up piece to an earlier paper which summarizes the current state of the rule of capture in Canadian oil and gas law. Research for the earlier paper revealed very little Canadian legal scholarship relating to the rule of capture in Canadian oil and gas law. There was none dealing with the issue of whether the rule of capture extends across jurisdictional boundaries in Canada. As a result, research for this proposed paper will necessarily include research in other areas of law and other jurisdictions in order to identify analogies and guiding principles. This preliminary bibliography reflects the diversity in sources of doctrine and literature to be consulted in the preparation of the proposed paper.

# THE RULE OF CAPTURE: DOES IT CROSS THE LINE?

## PRELIMINARY BIBLIOGRAPHY

### LEGISLATION

#### **Federal**

*Canada National Parks Act*, S.C. 2000, c. 32.

*Canada Oil and Gas Operations Act*, R.S.C. 1985, c. O-7.

*The Constitution Act 1867* (U.K.), 30&31 Vict., c.3, reprinted in R.S.C. 1985, App. II, No. 5.

*Western Arctic (Inuvialuit) Claims Settlement Act*, S.C.1984, c. 24, W-6.7.

*Yukon First Nations Land Claims Settlement Act*, S.C. 1994, c. 34.

#### **Provincial**

*Oil and Gas Conservation Act*, R.S.A. 2000, c. O-6.

*Oil and Gas Conservation Act*, R.S.S. 1978, c. O-2.

*Oil and Gas Act*, S.M. 1993, c.4 C.C.S.M. c. 034.

*Oil and Gas Act*, R.S.Y. 2002, c. 162.

*Petroleum and Natural Gas Act*, R.S.B.C. 1996, c. 361.

### JURISPRUDENCE

#### **Canadian**

*Canada (A.G.) v. Hydro Québec*, [1973] 3 S.C.R. 213.

#### **International**

*Guyana v. Suriname* (2007), <[http://www.pca-cpa.org/showpage.asp?pag\\_id=1147](http://www.pca-cpa.org/showpage.asp?pag_id=1147)> (Permanent Court of Arbitration), (Arbitrators: H.E. Judge L. Dolliver M. Nelson, Professor Thomas M. Frank, Dr. Kamal Hossain, Professor Ivan Shearer, and Professor Hans Smit)

### SECONDARY MATERIALS: MONOGRAPHS

**Hogg, Peter W. *Constitutional Law of Canada* 5th ed., loose leaf (Toronto: Thomson Carswell, 2007).**

The leading authority on Canadian constitutional law: sets out fundamental doctrinal principles. It is an excellent source of the leading case law in the area of constitutional law and jurisdiction over natural resources.

**LaForest, G. *Water Law in Canada – the Atlantic Provinces*, (Ottawa: Department of Regional Economic Expansion, 1972).**

The author is a former justice of the Supreme Court of Canada. This work is considered the original go to work for water law in Canada, as the title suggests, its focus is on the Maritime Provinces.

**Saunders, J. Owen. *Interjurisdictional Issues in Canadian Water Management*, (Calgary:**

**Canadian Institute of Resources Law, 1988).**

The author, a frequent writer in the area of Canadian natural resources law, canvasses issues arising from federal-provincial arrangements in respect of interprovincial waters.

**Taverne, Bernard. *Petroleum, Industry and Governments: A Study of the Involvement of Industry and Governments in the Production and Use of Petroleum*, 2nd ed. (The Netherlands: Kluwer Law International BV, 2008).**

Chapter 5 of this book deals with the subject of the ownership of petroleum in and the joint exploitation of petroleum from straddling petroleum reservoirs in petroleum producing jurisdictions around the world. It provides a useful overview and basis for further, specific research.

## SECONDARY MATERIALS: ARTICLES

**Ballem, John Bishop. “Oil and Gas Under the New Constitution” (1983) 61 Can. Bar Rev. 547.**

Ballem is the original oil and gas lawyer in Canada and is a leading expert in the field of Canadian oil and gas law. In this article he assesses the legal effects of the 1982 *Constitution*, the natural resources amendment in particular. This will be a useful touchstone, particularly for searching for further articles (authors who have cited this article).

**Bankes, N.D. “Constitutional Problems Related to the Creation and Administration of Canada’s National Parks” in J. Owen Saunders ed., *Managing Natural Resources in a Federal State. Banff Conference on Natural Resources Law, 2<sup>nd</sup>, Banff, 1985*. (Toronto: Carswell, 1986) 212.**

The author is a well respected expert in the areas of property, natural resource and international environmental law. In this paper the author discusses the constitutional models for the creation of National Parks in Canada, legislative jurisdiction over National Parks and the terms of various federal-provincial agreements on National Parks, including some comments on title to and control over exploration for and development of mineral resources. The paper is a useful starting point for updating research on issues relating to jurisdiction/ownership of oil and gas resources extending

from a province into a National Park. There have been cases dealing with resource activity in national parks as well as a number of parks created since this paper was written.

**Barton, Barry. “Cooperative Management of Interprovincial Water Resources” in J. Owen Saunders ed., *Managing Natural Resources in a Federal State. Banff Conference on Natural Resources Law, 2<sup>nd</sup>, Banff, 1985.* (Toronto: Carswell, 1986) 235.**

The author is a recognized expert in the areas of natural resource and regulatory law. At the time of writing he was a research associate with the Canadian Institute of Resources Law. The article canvasses various cooperative arrangements between provinces and between provinces and territories respecting transboundary waters. The way in which Canadian provinces have dealt with (potential) disputes in respect of transboundary waters, particularly moving waters, will provide a useful analogy for how they may view/deal with transboundary petroleum resources.

**Bastida, Ana E. & Ifesi-Okoye *et al.*, “Cross-border Unitization and Joint Development Agreements: an International Law Perspective” (2006-2007) 29 Hous. J. Int’l. L. 355.**

The lead author has a Ph.D. from Dundee in energy law. This article surveys the approach by petroleum producing states to production from reservoirs that straddle jurisdictional boundaries. It focuses on the use of and differences between cross-border unitization and joint development. The article canvasses basic concepts and guiding principles of international law in this area and examines a number of specific examples worldwide and so will be a useful guide to leading doctrine.

**Hickey Jr., James E. “The Environmental Implications of the Discovery and Delivery of New Energy Resources in the Canada/U.S. Context (2002) 28 Can. U.S. L.J. 207.**

At the time of writing the author was the Director of International Programs and a Professor (Law) at the Hofstra University School of Law. He holds a Ph.D. from Cambridge. In this essay the author makes the case that traditional notions of exclusive sovereignty and control over energy resources and production will be challenged as the continental energy market (North America) becomes increasingly viewed as a single system where action in one sector or one country effects decisions and actions in another. While not directly on point, the article provides a useful analogy for the issues that may arise as provinces increasingly compete with each other for oil and gas revenues.

**Lacasse, Jean-Paul. “Oil and Gas Revenue Sharing: Beyond Legal Foundations and Constraints” in J. Owen Saunders ed., *Managing Natural Resources in a Federal State. Banff Conference on Natural Resources Law, 2<sup>nd</sup>, Banff, 1985.* (Toronto: Carswell, 1986) 73.**

At the time of writing the author was the Director of Graduate Studies and a Professor (Law) at the University of Ottawa. The paper assesses the legal frameworks applicable to the sharing of oil and gas revenues between the provinces and the federal governments. It contains useful observations about intergovernmental tensions over ownership and control over the exploitation of oil and gas resources in Canada.

**Laux, Frederick A. “Banff Incorporation: A Lesson in Cooperative Federalism” (1991) 29 Alta. L. Rev. 635.**

The author describes the creation of the municipality of Banff within the federal enclave of Banff National Park. The opening sections of the article set but a useful overview of the history of land ownership and jurisdiction over natural resources in Alberta.

**Laycraft, J.H. & Ivan L. Head. “Theories of Ownership of Oil and Gas” (1953) 31 Can. Bar Rev. 382.**

This article was written early in the careers of these two distinguished lawyers/jurist (Laycraft). The article provides a concise overview of ownership theories for petroleum in the U.S., England and Canada providing a useful historical perspective on the issue.

**Low, Cecilia A. “The Rule of Capture: Its Current Status and Some Issues to Consider” (2009) 46 Alta. L. Rev. 799.**

The author assesses the current state of the rule of capture in Canada both in terms of the common law application and its use in the regulatory (*i.e.* conservation) context. The article includes a review of the history and development of the rule of capture and its adoption in petroleum producing jurisdictions outside of Canada including the U.S. The conclusion of the article raises several issues for consideration including whether the rule of capture ought to apply to trans-boundary reservoirs.

**Reynolds, Thomas A. “Delimitation, Exploitation, and Allocation of Transboundary Oil & Gas Deposits Between Nation-States” (1995) 1 ILSA J. Int’l. & Comp. L. 135.**

The author was a candidate for a J.D. from the Suffolk University Law School at the time of writing. The article provides a useful, high level survey of the treatment of transboundary petroleum deposits in the U.S. and in international law. It contains very brief case summaries of key international case law dealing with the delimitation of offshore boundaries where the development of petroleum deposits was an issue. Finally, the article is useful for its cites to leading authors (e.g. Lagoni) in the area.

**Weaver, Jacqueline Lang & Asmus, David F. “Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of National Laws and Private Contracts” (2006) 28 Hous. J. Int’l. L. 3.**

The authors provide a comprehensive survey of rationales for and specific means of unitization of petroleum reservoirs in a wide variety of petroleum producing jurisdictions around the world. Unitization is a means of avoiding the negative effects of the application of the rule of capture. Understanding its application will be useful for developing arguments re: application of the rule of capture across jurisdictions.

## **GOVERNMENT MATERIALS**

### **Canadian**

***Agreement on the Subject of the Transfer to the Province of its Natural Resources, Made on the ninth day of January 1926 between the Dominion of Canada and the Province of Alberta.***

***Gwich’in Comprehensive Land Claim Settlement Agreement, Made on the 22<sup>nd</sup> day of April, 1992 between Her Majesty the Queen in Right of Canada and the Gwich’in as Represented by the Gwich’in Tribal Council.***

***The Western Accord: An agreement between the Governments of Canada, Alberta, Saskatchewan and British Columbia on oil and gas pricing and taxation, 28<sup>th</sup> March 1985.***

### **U.S.**

**Alaska, Department of Natural Resources Division of Oil and Gas, *Oil and Gas in ANWR? It’s Time to Find Out!* (online: [http://www.anwr.org/features/pdfs/ANWR\\_DNR\\_review.pdf](http://www.anwr.org/features/pdfs/ANWR_DNR_review.pdf)) at 11 (Report prepared in support of Governor Knowles’ testimony before the U.S. Senate Energy and Resources Committee April 5, 2000).**

Report prepared by State of Alaska officials with responsibility for developing/conserving Alaska’s oil and gas resources. The report sets out facts and figures, including information relating to potential for petroleum reservoirs to extend from state lands under federal lands in ANWR. The article also raises legal/policy issues relating to application of the rule of capture to such reservoirs.

**THE COST OF CONSULTATION: THE CROWN'S HONOUR; THE  
STAKEHOLDERS' EXPENSE.**

**ANNOTATED WORKING BIBLIOGRAPHY**

Compiled by: Claire MacDougall  
December 29, 2009

**INTRODUCTION**

This working bibliography has been prepared as a course requirement for Law 703 at the University of Calgary, Faculty of Law, Fall 2009. The materials gathered to date, and the annotations provided, will be utilized as the initial research for my major paper, to be completed in the Spring, 2010 for Law 706. Both Law 703 and 706 are course requirements for the completion of my LLM.

My major paper will examine the manner in which the costs associated with the duty to consult and accommodate are being distributed in Alberta through legislation and regulation. I will consider whether this maintains the honour of the Crown in Alberta's natural resource industry. Further I will explore, through a detailed single-case doctrinal case study, whether the goal of reconciliation between Crown and Aboriginal peoples is being fulfilled.

The doctrinal development regarding the Crown's duty to consult and accommodate Aboriginal people falls into the two general categories of prior to, or following, the Supreme Court Consultation Trilogy of *Haida Nation*, *Mikisew Cree* and *Taku River*, *below* at 2. These three cases will be referred to as the Consultation Trilogy in the following annotations.

A number of articles cited within this Working Bibliography are from Resources, the newsletter published by the Canadian Institute of Resources Law (CIRL). Rather than reiterate the proposed target audience of each CIRL article, I am electing to incorporate CIRL's own webpage summary of its purpose here, from [www.cirl.ca](http://www.cirl.ca):

[CIRL]...is the leading national centre of expertise on legal and policy issues relating to Canada's natural resources. Since its establishment in 1979, the Institute has pursued a three-fold mandate of research, education, and publication. The Institute initiates projects and responds to requests from the public and private sectors and from non-governmental organizations.

**LEGISLATION**

*Administrative Procedures and Jurisdiction Act*, R.S.A. 2000, c. A-3.  
*Alberta Land Stewardship Act*, S.A. 2009, c. A-26.8.  
*Alberta Rules of Court*, *Alta. Reg.* 390/1968

*Constitution Act*, 1982, being Schedule B to the Canada Act 1982 (U.K.), 1982, c. 11, reprinted R.S.C. 1985, App. II, No. 44  
*Energy Resources Conservation Act*, R.S.A. 2000, c. E-10  
*Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12.  
*Environmental Appeal Board Regulation*, A.R. 114/93.

## JURISPRUDENCE

*Carrier Sekani Tribal Council v. British Columbia (Utilities Commission)*, 2009 BCCA 67.  
*Cheyne v. Alberta (Utilities Commission)*, 2009 ABCA 94.  
*Delgamuukw v. British Columbia*, [1997] 3 S.C.R. 335.  
*Dene Tha' First Nation v. Alberta (Energy and Utilities Board)*, 2005 ABCA 68.  
*Haida Nation v. British Columbia (Minister of Forests)*, 2004 CarswellBC 2656, 2004 SCC 73, 245 D.L.R. (4th) 33.  
*Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage)*, 2005 CarswellNat 3756, 2005 SCC 69, 259 D.L.R. (4th) 610.  
*Paul v. British Columbia (Forest Appeals Commission)*, 2003 SCC 55, [2003] 2 S.C.R. 585, 2003 SCC 55.  
*R. v. Sparrow*, [1990] 1 S.C.R. 1025.  
*R. v. Vanderpeet*, 1996 CarswellBC 2309, [1996] S.C.R. 507.  
*Siksika Nation Elders Committee, Re* (2007), 2007 CarswellAlta 672  
*Siksika Nation Elders Committee, Re*, 2008 CarswellAlta 614, [2008] A.W.L.D. 2630, [2008] A.W.L.D. 2542.  
*Siksika First Nation v. Alberta (Director, Southern Region, Environment)* (2006), 2006 CarswellAlta 2101  
*Siksika First Nation v. Alberta (Director, Southern Region, Environment)*, 2007 CarswellAlta 1678, 2007 ABCA 402, 33 C.E.L.R. (3d) 204.  
*Taku River Tlingit First Nation v. British Columbia (Project Assessment Director)*, [2004] 3 S.C.R. 550, 2004 SCC 74.  
*Tsuu T'Ina First Nation v. Alberta*, [2008] A.B.Q.B. 547.  
*Whitefish Lake First Nation v. Alberta (Energy and Utilities Board)*, 2004 ABCA 49.

## SECONDARY MATERIAL: ARTICLES

Bankes, Nigel. "Natural Resource Projects, Indigenous Peoples and the Role of International Law" (2004) 87 Resources 1-7, online: <http://ciril.ca/Archives/Resources87.pdf>.

Professor Nigel Bankes is on the Board of Directors of Resources, and publishes quite frequently in its pages. Further, Bankes is a professor and Chair of Natural Resources in the Faculty of Law at the University of Calgary. Writing for the Resources audience, which includes public, private, and academic sectors, Bankes' tone is universally approachable. In this article he focuses on the role of international law relating to natural resource projects and Indigenous People.

While this article is clearly written, it has limited applicability to my major paper, as it addresses a number of international conventions and covenants not immediately applicable to an Alberta costs discussion. However, although the international laws referenced by Bankes do not specifically reference Indigenous People “...the general argument is that if the norms contained in these conventions were applied to Indigenous Peoples in a non-discriminatory manner that would serve to limit or constrain state power.” As such, this paper presents a keen warning to both third-party stakeholders and the Crown in Canada that if Canadian Aboriginal People remain dissatisfied with how their natural resource interests are being recognized, recourse to international bodies remains an avenue for further rights determination.

———. “Mikisew Cree and the Lands Taken Up Clause of the Numbered Treaties” (2005-2006) 92/93 Resources 1-8, online: <http://cir1.ca/Archives/Resources92-93.pdf>.

This article by Bankes is extremely informative regarding the impact of the *Mikisew Cree, supra* decision on the province of Alberta. Alberta’s active intervenor role at trial and during the appeal process led to clarification that the province cannot unilaterally reclassify land subject to treaty. This brief comment covers seven discrete questions regarding the interplay between the duty to consult, and treaty and fiduciary duties. This is an area where incremental common law changes to the Crown-Aboriginal relationship have resulted in confusion as to duties owed, and the timing in which they are owed. Bankes articulates how the Supreme Court of Canada, through *Mikisew Cree, supra* has helped clarify parties’ roles and responsibilities. Bankes examines the object of reconciliation in detail, which is pertinent to my major paper. This article unmistakably advises the provincial Crown that following the Consultation Trilogy, the honour of the provincial Crown is also at stake in dealings with Aboriginal People.

———. “Water Management Planning and the Crown’s Duty to Consult and Accommodate: A Comment on *Tsuu T’Ina First Nation v. Alberta*” (2008) 103 Resources 1-8, online: <http://cir1.ca/Archives/Resources103.pdf>.

In this comment on the case of *Tsuu T’Ina First Nation v. Alberta (Environment)*, 2008 ABQB 547 [*Tsuu T’Ina*], Bankes provides a scathing review of Justice LoVecchio’s reasoning at the Court of Queen’s Bench. He questions Justice LoVecchio’s conclusions regarding the existence of two distinct lines of consultation cases, one line of “anticipated” government action cases following *Haida, supra* and one line of “completed government action” cases following *Sparrow, supra*. This article is clearly intended for a legal audience, as few other than legal practitioners and scholars will have read *Tsuu T’Ina, supra*. For consultation to be effective, Bankes reveals it “must reach behind any particular administrative decision [example omitted] and examine the broader regulatory scheme of which the particular permit may be a part”. This current comment offers a further warning to all three parties that even resorting to litigation might

not immediately resolve disputes over the depth of consultation owed to Aboriginal Peoples under current regulatory schemes.

Carpenter, A.W. (Sandy) & Peter D. Feldberg. “An Introduction to the Use of Publicly Available Information in Assessing and Managing Aboriginal Risks” (2006) *Alta . L. Rev.* 65-91.

A.W. (Sandy) Carpenter and Peter Feldberg are partners at Faskin Martineau LLP in Calgary, Alberta. Carpenter and Feldberg are practitioners approaching the issue of consultation with Aboriginal people for the purpose of advising industry on how to maintain the confidentiality of proprietary mineral resource development information. Written with the succinct clarity of experienced practitioners, this article provides a superb summary of the legal underpinnings of the Crown’s duty to consult, and industry’s resulting liabilities. Carpenter and Feldberg advise at 21: “An Aboriginal risk assessment that takes place early in the planning stages of a project or program will usually have to rely on publicly available information. As project planning and, where appropriate, consultation progress, this information can be supplemented or replaced by information provided directly by the First Nation(s) in question.” The clarity with which the authors explain complex corporate considerations is comparable to Timothy Huyer’s broadly accessible style in “Honour of the Crown: The New Approach to Crown-Aboriginal Reconciliation”, below.

Devlin, Richard F. & Ronalda Murphy. “Contextualizing the Duty to Consult: Clarification or Transformation?” *14 Nat’l J. Const. L.* 167.

Richard Devlin is a professor, and Ronalda Murphy an associate professor, at the Schulich School of Law, Dalhousie University. This article pre-dates the Consultation Trilogy, so in that regard its applicability is limited. However, as the article is following the British Columbia Court of Appeal reasonings in *Haida Nation v. British Columbia (Minister of Forests)* 2002 CarswellBC 329, [2002] B.C.J. no. 378, 2002 BCCA 147, additional reasons at 2002 CarswellBC 2067, [2002] B.C.J. No. 1882, 2002 BCCA 462, where the Court of Appeal for the first time considered extending the common law duty to consult to industry (Weyerhaeuser), it provides a pinpoint summary of the “nascent doctrine regarding the duty to consult.” Ultimately, the Supreme Court of Canada rejected the Court of Appeal’s proposition that industry owes a direct duty to consult with Aboriginal People. What remains particularly relevant from this article are the cautions to all parties regarding avoiding litigation, and, by association, the costs of litigation. It is noted at p. 21 “...the duty to consult forces conversations that may lead to settlement and thus avoid litigation...It is legitimate for the legal system to create incentives for the relevant actors to see each other in non-adversarial terms...”

Fogarassy, Tony & KayLynn Litton. “Consultation with Aboriginal Peoples: Impacts on the Petroleum Industry” (2004) *42 Alta. L. Rev.* 41-73.

Perhaps because this article predates the Constitutional Trilogy, the advice to industry and the Crown regarding upholding the Crown's honour through fulfilling a meaningful consultation process with Aboriginal people is wonderfully thorough. At the time Fogarassy and Litton composed this article, the British Columbia Court of Appeal in *Haida Nation v. British Columbia (Minister of Forests)* (2002), 99 B.C.L.R. (3d) 209 (C.A.) [Haida No. 1]; *Haida Nation v. British Columbia (Minister of Forests)* (2002), 5 B.C.L.R. (4th) 33 (C.A.), leave to appeal to S.C.C. granted [2002] S.C.C.A. No. 417 (QL) [Haida No. 2]. had found (despite the issue not being before the Court) that industry owed a duty of consultation to Aboriginal people. This decision was overturned by the Supreme Court of Canada in *Haida, supra*. However, as the authors were contemplating a direct duty, the suggestions posed for industry's response to fulfilling that duty are far-reaching, and offer industry today a range of options available for ensuring that any procedural duties delegated to them by the Crown are fulfilled.

Gogal, Sandra *et al.* "Aboriginal Impact Agreements: Practical Considerations" (2005) 43 Alta. L. Rev. 129-157.

Huyer, Timothy. "Honour of the Crown: The New Approach to Crown-Aboriginal Reconciliation" (March, 2006) 21 W.R.L.S.I. 33.

Since authoring this article as an LLB student at Queen's University, Huyer has gone on to serve as Law Clerk at the Federal Court of Canada and to become Counsel at Justice Canada. This is a brilliantly researched and succinct article, accessible to a wide audience. Huyer dissects the Supreme Court of Canada's newest incarnation of the reconciliation process between Crown and Aboriginal peoples in Canada post Consultation Trilogy. At the time of writing, Huyer had already obtained his B.A. (Alberta), M.A. (Queen's) and CFA. Although it is an undergraduate student paper, Huyer provides a thorough and thoughtful deconstruction of the complicated interactions between Crown, Aboriginal and industry players. His paper explores the complex history of distrust between Aboriginal communities and government. His paper is useful in describing the intricacies of the consultation process required by the Consultation Trilogy, and provides an overview of pitfalls in the consultation process, which he posits does not necessarily lead to reconciliation.

Isaac, Thomas & Anthony Knox. "The Crown's Duty to Consult Aboriginal People" 41 Alta. L. Rev. 49-77.

Lowe, John E. & Jonathan M. Liteplo. "Recent Regulatory and Legislative Developments of Interest to Oil and Gas Lawyers 2007 – 2008" (2009) 46 Alta L. Rev. 521-580.

Mullan, David. "The Duty to Consult Aboriginal Peoples--The Canadian Example" (2009) 22 CJALP 107, 22 Can. J. Admin. L. & Prac. 107.

David Mullan is Emeritus Professor, Faculty of Law, Queen's University, Kingston, Ontario. In this article Professor Mullan compares the common law duty to consult, as expressed by the Supreme Court of Canada, with the duty of procedural fairness. The basis for this paper was Canada's refusal to be a signatory to the United Nations Declaration of Rights of Aboriginal Peoples, in 2007. This article offers a comprehensive overview of the common law development regarding the duty to consult in Canada, as well as the interplay between tribunal procedural fairness requirements and tribunals' quasi-judicial/quasi-Crown status. A doctrinal review of case law is followed by a review of how the issue of consultation has been addressed by Canadian administrative tribunals. Although the impetus of the article was Canada's refusal to sign the United Nations Declaration, this issue is not really raised other than as a framework to show what Canada does instead to consult with First Nations. The author concludes that the internal and international perceptions of Canada, for its refusal, likely sends the wrong message regarding the Crown's willingness to consult and accommodate. This article is very useful in that it provides a comprehensive doctrinal backdrop upon which to proceed with the questions posed by my paper.

Poschwatta-Yearsley & Adam Zelmer. "The Alberta Land Stewardship Act: Certainty or Uncertainty?" (2009) 106 Resources 1-9, online: <http://cirl.ca/Archives/Resources106.pdf>.

Passelac-Ross, Monique & Verónica Potes. "Consultation with Aboriginal Peoples in the Athabasca Oil Sands Region: Is it Meeting the Crown's Legal Obligations?" (2007) 98 Resources 1-7, online: <http://cirl.ca/Archives/Resources98.pdf>.

———. "Crown Consultation with Aboriginal Peoples in Oil Sands Development: Is it Adequate, Is it Legal?" (2007) CIRL Occasional Paper #19 52, online: <http://cirl.ca/OP19AboriginalOilsands.pdf>.

Popowich, Morris. "The National Energy Board as Intermediary Between the Crown, Aboriginal Peoples, and Industry" (2007) 44 Alta. L. Rev. 837-861.

At the time of publishing, Popowich was articling with Macleod Dixon in Toronto. He attended law school at Osgood Hall, and was called to the Ontario Bar in 2008, and is currently working as an associate with Macleod Dixon. His research and comprehensive analysis of the National Energy Board's (NEB) consultation policy development is valuable to any party interested in the Aboriginal consultation process and expectations of the NEB. Popowich's historical context for the NEB's relations with Aboriginal Peoples harkens back to the Berger Report, released by Justice Berger in May 1977, following the federal mandate to investigate the socio-economic and environmental impacts of the proposed MacKenzie Valley Pipeline. The historical context is more detailed than many of the articles reviewed for my major paper.

Reid, David & Stephanie Hickman. "Aboriginal Rights and the Atlantic Canada Petroleum Industry" (Fall, 2007) 30 *Dalhousie L. J.* 383.

Ross, Monique M. "Aboriginal Peoples and Resource Development in Northern Alberta" (2003) CIRL Occasional Paper #12 32, online: <http://cirl.ca/OP12Peoples.pdf>.

Monique M. Passelac-Ross (nee Ross) has published extensively with CIRL since the late 1990's. As a Research Associate at CIRL, Passelac-Ross submitted this Occasional Paper (Occasional Papers are routinely published on the CIRL website). This paper was prepared as part of a larger research project focusing on conflicts between industry, the provincial Crown, and Aboriginal peoples in Northern Alberta. Although the paper pre-dates the Consultation Trilogy, which has clarified some of the questions posed by Ross, many of the issues presented are still pertinent. Through the examples of three development projects in Northern Alberta, Ross successfully foreshadows how the provincial Crown's unwillingness to assume responsibility for meaningful consultation with Aboriginal groups in Northern Alberta had created a situation ripe for litigation. The article is beneficial for highlighting cost considerations of which all parties to consultation should be aware.

Szatylo, Deborah M.I. "Recognition and Reconciliation: An Alberta Fact or Fiction? The Duty to Consult in Alberta and the Impact on the Oil and Gas Industry" (2002) 1 *INDIGLJ* 201, 1 *Indigenous L.J.* 201.

Deborah Szatylo is an associate with Davis LLP. She was called to the Alberta bar after clerking with the Alberta Court of Appeal in 2003. This paper, prepared during her articles, addresses the limitations Alberta puts on acknowledging a provincial duty to consult with First Nations. Szatylo begins with a doctrinal overview of the development of the duty to consult with First Nations, both legislatively and in case law. She then provides a comparative review of how, through case law, the duty to consult has been expanded to include a provincial crown duty, and in some instances, a duty on the part of industry. Her thesis, that Alberta has actively tried to sidestep acknowledging a provincial duty to consult, reveals her bias of preferring how the British Columbian provincial government has acknowledged its duty and is attempting to incorporate consultation requirements into provincial legislation. Szatylo's paper is useful to my research in that it concludes with a clear warning to industry that Alberta's view of its duty to consult may be too narrow, with the cost consequences from successful judicial reviews often being borne by industry rather than the Crown.

Treacy, Heather L. et. al. "The Current State of the Law in Canada on Crown Obligations to Consult and Accommodate Aboriginal Interests in Resource Development" (2007) 44 *Alta. L. Rev.* 571-618.

This article was written by a number of Fraser Milner Casgrain L.L.P. (FMC)

associates and partners, although two, Jamie D. Dickson and Tara L. Campbell, are no longer with FMC. It is directed primarily at the resource industry clientele of FMC, but also serves as a copiously documented legal resource for practitioners and academics. The article offers detailed historical doctrinal tracing of the Canadian common law developments regarding Aboriginal right and title. For the purposes of my major paper, the extensive analysis of costs of consultation being delegated to third party stakeholders is very enlightening. The article was published following the Consultation Trilogy, and clearly distinguishes case and statute law into pre and post Consultation Trilogy categories. Further, Treacy et. al. review the regulatory requirements for consultation under provincially (British Columbia and Alberta) as well as federally regulated energy projects. This article excels at maintaining readers' attention through decades' worth of dense case-law and incremental legislative responses.

Youngblood Henderson, James (Sa'ke'j). "Aboriginal and Treaty Rights and Tribunals" (2006) 19 CJALP 1, 10 Can. J. Admin. L. & Prac. 1.

**ANNOTATED BIBLIOGRAPHY**  
**ABORIGINAL SELF DETERMINATION: ARE WE THERE**  
**YET?**

David K. Laidlaw

December 4, 2009

**PREFACE:** In the past ten years Canada has enacted a series of legislation in relation to First Nations including among others: *First Nations Land Management Act*, S.C. 1999, c.24, *First Nations Goods and Services Tax Act*, 2003, S.C. 2003, c. 15, *First Nations Fiscal and Statistical Management Act*, S.C. 2005, c.9, *First Nations Oil and Gas Moneys Management Act*, S.C. 2005, c.48. and the *First Nations Commercial and Industrial Development Act*, S.C. 2005, c.53. This legislation is in the form of enabling legislation: it permits First Nations upon entering into a variety of agreements with the governments to assume some degree of control over their lands, resources, moneys and development. Participation in this enabling legislation is voluntary.

Questions: The objective of this thesis will be to assess the enabling legislation and Agreements as instruments of First Nations self-determination.

**LEGISLATION**

*The Constitution Act 1867 (British North America Act)*, 30 & 31 Victoria, c. 3. (U.K.).

*The Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (U.K.), 1982, c. 11.

*Indian Act*, R.S.C. 1985, c. I-5.

*Indian Oil and Gas Act*, R.S.C. 1985, c. I-7.

**JURISPRUDENCE**

*Calder et al. v. Attorney-General of British Columbia* (1973), [1973] S.C.R. 313, [1973] 4 W.W.R. 1.

*Guerin v. The Queen* (1984), [1984] 2 S.C.R. 335, 13 D.L.R. (4th) 321, [1984] 6 W.W.R. 481.

*R. v. Sparrow* (1990), [1990] 1 S.C.R. 1075, 70 D.L.R. (4th) 385, [1990] 4 W.W.R. 410, 56 C.C.C. (3d) 263, [1990] 3 C.N.L.R. 160, 46 B.C.L.R. (2d) 1.

*R. v. Badger* (1996), [1996] 1 S.C.R. 771, 133 D.L.R. (4th) 324, [1996] 4 W.W.R. 457, 105 C.C.C. (3d) 289, [1996] 2 C.N.L.R. 77, 37 Alta. L.R. (3d) 153.

*R. v. Van der Peet* (1996), [1996] 2 S.C.R. 507, 137 D.L.R. (4th) 289, 109 C.C.C. (3d) 1, 50 C.R. (4th) 1, [1996] 4 C.N.L.R. 177, 23 B.C.L.R. (3d) 1.

*R. v. Pamajewon* (1996), [1996] 2 S.C.R. 821, 138 D.L.R. (4th) 204, 109 C.C.C. (3d) 275, [1996] 4 C.N.L.R. 164, 50 C.R. (4th) 216, 92 O.A.C. 241.

*Delgamuukw v. British Columbia* (1997), [1997] 3 S.C.R. 1010, 153 D.L.R. (4th) 193, [1999] 10 W.W.R. 34, [1998] 1 C.N.L.R. 14, 66 B.C.L.R. (3d) 285.

*Reference re Secession of Quebec* (1998), [1998] 2 S.C.R. 217, 161 D.L.R. (4th) 385, 55 C.R.R. (2d) 1.

*R. v. Marshall* (1999), [1999] 3 S.C.R. 456, 178 N.S.R. (2d) 201, 177 D.L.R. (4th) 513, 138 C.C.C. (3d) 97, [1999] 4 C.N.L.R. 161 (Marshall I).

*R. v. Marshall* (1999), [1999] 3 S.C.R. 533, 179 N.S.R. (2d) 1, 179 D.L.R. (4th) 193, 139 C.C.C. (3d) 391, [1999] 4 C.N.L.R. 301

*Mitchell v. M.N.R.*, 2001 SCC 33, [2001] 1 S.C.R. 911, 199 D.L.R. (4th) 385, 83 C.R.R. (2d) 1, [2001] 3 C.N.L.R. 122, [2002] 3 C.T.C. 359, 206 F.T.R. 160.

*Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73, [2004] 3 S.C.R. 511, 245 D.L.R. (4th) 33, [2005] 3 W.W.R. 419, 19 Admin. L.R. (4th) 195, [2005] 1 C.N.L.R. 72, 36 B.C.L.R. (4th) 282.

*Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage)*, 2005 SCC 69, 3 S.C.R. 388, 259 D.L.R. (4th) 610, 37 Admin. L.R. (4th) 223, [2006] 1 C.N.L.R. 78.

*R. v. Sappier; R. v. Gray*, 2006 SCC 54, [2006] 2 S.C.R. 686, 309 N.B.R. (2e) 199, 309 N.B.R. (2d) 199, 274 D.L.R. (4th) 75, 214 C.C.C. (3d) 161, [2007] 1 C.N.L.R. 359.

*Mississaugas of Scugog Island First Nation v. National Automobile Aerospace Transportation and General Workers Union of Canada* (2007), 88 O.R. (3d) 583, 287 D.L.R. (4th) 452, 231 O.A.C. 113 (Ont. C.A.), aff'g (2006), [2006] 3 C.N.L.R. 46, 142 C.R.R. (2d) 148, 213 O.A.C. 2 (ON S.C.D.C.), aff'g (2004), 110 C.L.R.B.R. (2d) 1 (Ontario Labour Relations Board) leave to appeal to S.C.C. refused 32452 (April 24, 2008).

**SECONDARY MATERIALS: ARTICLES**

**Black, Alexander J.** “Devolution of Oil and Gas Jurisdiction to First Nations in Canada” (2008) *Alberta Law Review* Vol. 45:3 537.

Alexander J. Black was, at the time of writing this article, Counsel for Aboriginal Law Services, Department of Justice Canada.

This article is an explanation of the intentions of the *First Nations Oil and Gas Moneys Management Act* together with a summary of the relevant provisions of the Act. While not an authorized statement of the Department of Justice, some government bias is apparent in the article. This is an article intended for legal professionals.

It is extremely relevant to my research topic as it canvasses the “devolution” of jurisdiction over oil and gas to First Nations.

**Flanagan, Tom and Christopher Alcantara.** “Individual Property Rights on Canadian Indian Reserves: A Review of the Jurisprudence” (2005) *Alberta Law Review* Vol. 42:4 1019.

Tom Flanagan was, at the time of writing this article, a Professor of Political Science at the University of Calgary. Teaching since 1968 he was awarded the University of Calgary’s Professorship in 2007 in recognition of his significant contribution to his discipline. Christopher Alcantara at the time of writing this article, a Ph.D. candidate at the University of Toronto. Now an Assistant Professor at Laurier University his areas of interest include First Nations politics.

This is a review of the jurisprudence and politics relating to individual property rights on reserves. Written before any significant development on the *First*

*Nations Land Management Act* it has confined itself to conventional First Nations jurisprudence with an exploration of actors in this complex area. There is some pro-development bias but it appears limited.

As a review of First Nations conventional jurisprudence this article would be useful for my thesis.

**Isaac, Thomas.** “*First Nations Land Management Act* and Third Party Interests” (2005) *Alberta Law Review* Vol. 42:4 1047.

Thomas Isaac was, at the time the article was written, a partner with the law firm of McCarthy Tétrault in British Columbia, practising in their Aboriginal Law Group. He was former Chief Treaty Negotiator for the Government of British Columbia and prior to that he was Assistant Deputy Minister responsible for establishing Nunavut for the Government of the Northwest Territories. He is the author of a casebook, “*Aboriginal Law: Commentary, Cases and Materials*” that is in its third edition.

As the title implies this article is a review of the key provisions of the *First Nations Land Management Act*, with an emphasis on the ability of third parties to acquire an interest in First Nations Lands. Again this would be a useful article for my thesis.

**Isaac, Thomas and Anthony Knox.** “Canadian Aboriginal Law: Creating Certainty in Resource Development” (2004) *U.N.B. L.J.* 53 3.

Thomas Isaac was, at the time the article was written, a partner with the law firm of McCarthy Tétrault in British Columbia, practising in their Aboriginal Law Group. He was former Chief Treaty Negotiator for the Government of British Columbia and prior to that he was Assistant Deputy Minister responsible for establishing Nunavut for the Government of the Northwest Territories. He is the

author of a casebook, *“Aboriginal Law: Commentary, Cases and Materials”* that is in its third edition. Anthony Knox was also a partner with McCarthy Tétrault.

A “developer hopeful” article that in brief terms summarizes the settler law treatment of aboriginal issues as being an anomalous part of Canadian law but drawing on general principles of settler law. A discussion of Impact Benefit Agreement (“IBA”) in the context of resource development is included. Some thorny issues are glossed over with a lawyerly caveat that “it appears” or “the trend appears to be” and so on. The inferences taken from the cases are arguable.

While a useful summary, its’ best use may be in a footnote as to contrary interpretations.

**Isaac, Thomas.** “The Power of Constitutional Language: The Case Against Using ‘Aboriginal Peoples’ as a Referent for First Nations” (1993-1994) *Queen’s L.J.* 19 415.

Thomas Isaac was, at the time the article was written, a Policy Consultant with Saskatchewan Indian and Métis Affairs Secretariat. Now a partner with the law firm of McCarthy Tétrault in British Columbia, practising in their Aboriginal Law Group. He was former Chief Treaty Negotiator for the Government of British Columbia and prior to that he was Assistant Deputy Minister responsible for establishing Nunavut for the Government of the Northwest Territories. He is the author of a casebook, *“Aboriginal Law: Commentary, Cases and Materials”* that is in its third edition.

Applying a feminist legal perspective, Mr. Isaac argues that the use of “aboriginal peoples” as a referent for First Nations is biased and demeaning. The abstraction of the legal system and the cognate of “aboriginal peoples” does not reflect the vitality and experience of First Nations people. While, perhaps correct, in that the Charter defines “aboriginal peoples” as including Indian, Inuit and Métis peoples,

the choice of “aboriginal peoples” in the Charter is an exercise in negation and belittlement.

While my original choice of “First Nations” over “indigenous peoples” in my proposed thesis was instinctive – this article would suggest that the choice was defensible. Technically it would also be correct in that the enabling legislation does explicitly reference First Nations.

**Wilkins, Kerry.** “”Still Crazy After All these Years”: Section 88 of the *Indian Act* at Fifty” (2000) *Alberta Law Review* Vol. 38:2 458.

Kerry Wilkins was, at the time of writing this article, a member of the Ontario Bar. This is a historical review of section 88 of the *Indian Act*. This section, which is still in the *Indian Act*, “provides, expressly as a matter of *federal* law, for the application of a great deal of *provincial* law to Indians” [emphasis in original at 459]. Given the devolution of enabling legislation as a matter of federal law to First Nations on subjects that often involve provincial law (such as oil and gas jurisdiction) this review, albeit before the advent of enabling legislation, will be very pertinent.

**Wilkins, Kerry.** “Negative Capability: Of Provinces and Lands Reserved for the Indians” (2002) *Indigenous Law Journal* Vol. 1 57.

Kerry Wilkins was, at the time of writing this article, a member of the Ontario Bar and an Adjunct Professor of Law at the University of Toronto.

This article argues that, on the basis of the *Delgamuukw* decision, that “lands reserved for Indians” included (1) the established Indian Reserves and (2) unsurrendered aboriginal title lands (the “s. 91(24) lands”). Only once the extent the s. 91 (24) lands was judicially determined or negotiated could third parties have any confidence on what level of government managed the lands. Professor

Wilkins argues that these s. 91 (24) lands would be within the Federal core competency under the Constitution and the Provinces would have little or no authority over these lands. (One note was that the *First Nations Land Management Act* would *not* apply to s. 91 (24) lands but only reserve lands.) An extended exploration of mechanisms to remedy this jurisdictional gap until aboriginal title claims can be resolved is explored. A detailed examination of the difference between the use of land and the right to manage the land in a First Nations context is included.

A pertinent article on the basis that the enabling legislation cannot be accessed by a First Nation until such time as it has negotiated or resolved its land claim (absent an agreement to the contrary). If not resolved or a resolution is left to a later date any enabling agreement may require an accompanying provincial agreement or a municipal agreement. Further Professor Wilkins, under a pith and substance doctrine, explores the management of lands reserved to Indian.

**Macklem, Patrick.** “First Nations Self-Government and the Borders of the Canadian Legal Imagination” (1991) McGill L.J. 36 382.

Patrick Macklem is a University of Toronto Professor.

This is a very relevant and extensive article, albeit, one that was prepared before the enabling legislation. In this article he extensively canvasses First Nation aspirations for self-determination in the context of conventional First Nation jurisprudence.

**Kline, Marlee.** “Race, Racism, and Feminist Legal Theory” (1989) 12 Harvard Women’s L.J. 115.

Ms. Kline was at the time this article was written was taking up a position an Assistant Professorship at the University of British Columbia. She continued at U.B.C. until her early death in 2001 from leukaemia.

In her view, at various times gender, while always relevant, would take second place to race, class and sexual orientation oppression and discrimination. Similarly “white women” have had a hegemony on the feminist discussion and that women of colour have been marginalized by, among others, appropriation of their voices, mistaken assumptions of commonality and even when addressed there is a failure to fully integrate the experience of women of colour into theory.

A controversial (and interesting) topic, this may have some relevance – particularly regarding matrimonial property rights on reserve under *First Nations Land Management Act* codes, women voting in customary “elections” and the compliance of Agreements under the *Charter of Rights and Freedoms*.

# CAPITAL FORMATION, CARBON FINANCE AND THE OBLIGATION TO CONSULT AND ACCOMMODATE

Annotated Bibliography

By Douglas V. Tingey

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## Introduction

This annotated bibliography is prepared in partial fulfillment of Law 703 and reflects preliminary research conducted in support of a major paper required for fulfillment of LL.M. course work program.

I am studying the use of carbon finance techniques to assist a Canadian First Nations community turn an imperfect asset (the government's obligation to consult and accommodate) into capital participation in a project and thereby assist with the economic development of that community

The principal research questions flowing from this topic is: What would need to be done to transform the obligation to consult and accommodate from the status of "asset" to "capital"? In other words, does carbon finance offer a means of doing so without having to strengthen the obligation to compel a commercial result?

The bibliography is divided into three sections – theoretical and analytical framework, the practical limits to the obligation to consult and accommodate, First Nations' participation in offset projects and ownership of offsets.

## ***Section 1 Theoretical and Analytical Framework***

### **Primary Sources**

#### *International conventions and treaties*

The United Nations Framework Convention on Climate Change, 31 I.L.M. 581 (1992) (UNFCCC)

The final text of the UNFCCC was negotiated in Rio in June of 1992 and came into force less that a year later in March 1993. The underlying purpose of the convention was to avoid human interference with the climate (and any negative

impact on ecosystems and the possibility of sustainably economic development) by stabilising greenhouse gas emissions. This purpose was supported by a number of principles particularly that of preservation of intergenerational equity and the need to respect “common but differentiated responsibility”. The latter principle is reflected in the distinction between Annex 1 (to the UNFCCC) and non-Annex 1 jurisdictions (between developed and new industrialised and developing jurisdictions). Most importantly the UNFCCC was set up as a framework rather than final document anticipating a process of implementation. It took no longer than a year for the parties to the convention at their first conference of parties (COP 1) to begin the road to Kyoto, much as the parties at COP 13 in Bali adopted a road map to a new framework agreement leading to Copenhagen two years later to achieve a renewal of the Kyoto Protocol and participation of the United States in its successor.

Kyoto Protocol to the United Nations Framework Convention on Climate Change, 37 I.L.M. 32 (1998)

The Kyoto Protocol was negotiated in 1997 but did not come into force until 2005 following its ratification by the Government of Russia. Its primary purpose is to commit industrialised and newly industrialised countries (referred to as Annex 1 jurisdictions) to a program of reductions in aggregate greenhouse gas emissions in reference to their 1990 levels during the protocol’s first compliance period running from January 1, 2008 to December 31, 2012. Canada ratified the protocol in 2002. The protocol introduced three “flexible mechanisms” designed to reduce the cost of compliance and to induce investment in project activities and the development and transfer of technology. The three mechanisms are the Clean Development Mechanism (CDM), Joint Implementation and Emissions Trading. The CDM is the international basis for project based carbon credit creation and will be discussed at some length in this research paper. The nature of the second compliance period is the subject of this year’s conference of parties in Copenhagen (see website below).

## **Secondary Sources**

### Books

de Soto, Hernando. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (London: Bantam Press, 2000)

Hernando de Soto is an economist. The Mystery of Capital is an important work that focuses on the reality of capital formation in poor communities in developing countries. He illustrates how the poor are in many circumstances not without assets. They may “own” a home or land but laws mainly relating to the

establishing and administering private property prevent the poor from converting assets into capital that can be used to support business activities. As a consequence, the poor are relegated to the informal markets where the ability to advance one's economic status is severely restrained. De Soto writes at length regarding approaches to remedying legal impediments existing in developing countries. I find that his analytical framework is a solid basis for examining issues relating to capital formation and wealth creation in First Nations communities in Canada.

Böhm, Steffen and Dabhi, Siddhartha, eds. *Upsetting the Offset: The Political Economy of Carbon Markets*, (London: Mayfly Books, 2009)

Both Bohm and Dabhi teach at the business school at the University of Essex. Their contribution to this collection of works and the collection itself when combined is a counterpoint to the "neo-liberal" market oriented approach to the Clean Development Mechanism and offsetting generally. Many of the works are written in the new left tradition of political economy with an emphasis here on notions of social justice, the economics of elite domination, ecological justice and the need for sustainable alternatives to the economics of international markets. The works remind us that in reality the interests of the poor and disadvantaged are often not designed into market solutions. This text places the research problem addressed by the research paper in a fuller context beyond the conversation that usually stops at offsets being a market incentive raising the need assess the impact of carbon finance on people.

Stewart, Richard B. Kingsbury, Benedict and Rudyk, Bryce, eds. *Climate Finance: Regulatory and Funding Strategies for Climate Change and Global Development*, (New York: New York University Press, 2009)

The editors of this book are either professors or senior researchers at the New York University Law School. Climate Finance stands in stark contrast to Upsetting the Offset. The work is self described as a collection of "policy papers" that look at various aspects of leveraging private sector finance to address climate mitigation especially through the development of "innovative" market mechanisms. The Clean Development Mechanism is found wanting for a different set of reasons that relate much more to the effectiveness of markets and the need to mobilise large sums of private money. This is an important text as it canvasses many of the mainstream views underpinning developed country approaches to climate change mitigation and is more likely to reflect the results of the negotiations in Copenhagen regarding the future design of climate mitigation laws and regulations and will impact on the usefulness of the arguments and analysis in my research paper than will Upsetting the Offset.

## Websites

UNFCCC. <http://unfccc.int/2860.php>

This is the home page for the UNFCCC's website. It is divided into five key parts: Home, The Clean Development Mechanism, Joint Implementation, The Climate Information Network and the Technology Transfer Clearing House. It is possible to track the progress of CDM and JI projects once an application for registration is filed. The process is open except for limit protections of key business details that are confidential.

## **Section 2. The practical limits to the obligation to consult and accommodate**

### **Primary Sources**

#### Cases

*Hupacasath First Nation v. British Columbia (Minister of Forests)* [2006] 1 C.N.L.R. 22 (B.C.S.C)

I have selected this case as it illustrates the application of a key limitation on obligation to consult and accommodate arising from Haida v. British Columbia (Minister of Forests), below. Put plainly, the obligation (and the courts use the word "duty") when activated does not give rise to a veto on a proposed course of action by a government or proposed business activity pending final resolution of a First Nation's land claim. In this instance, the First Nation involved was disputing the manner in which certain forest lands were being dealt with by the provincial government. Significantly, in a later if not the last communication between the BC Government and the First Nation, the prospect of participating in a carbon finance opportunity was put forward.

*Haida v. British Columbia (Minister of Forests)* 245 D.L.R. (4<sup>th</sup>) 33, 2004 SCC 73

In this case, the Supreme Court of Canada set out its position on the obligation of the government to consult with Aboriginal peoples and accommodate their interests stating that in the context of pending land claims this duty is "grounded in the honour of the crown". This case is the leading case law authority supporting the limitation on consult and accommodate illustrated in Hupacasath First Nation v. British Columbia (Minister of Forests). This case and its application may also be viewed as the key element of Canadian law preventing the obligation (duty) from evolving from an "asset" to "capital".

### **Secondary Sources**

#### Books

Helin, Calvin. *Dances with Dependency: Indigenous Success through Self-Reliance* (Vancouver, Orca Spirit Publishing & Communications Inc., 2006)

Calvin Helin is a businessman and lawyer. He is a member of a west coast Canadian First Nation. In Dances with Dependency, Helin surveys and describes three distinct “waves” in aboriginal Canadian history - that of pre western contact self-reliance, the impact of colonisation, and the introduction of a welfare state characterised by complete dependence on government support. Helin’s fourth wave focuses on an action plan to address the sorts of issues discussed by de Soto in The Mystery of Capital. I find that Helin’s work provides a Canadian example of de Soto’s theoretical structure and this is one of the reasons why I have framed my research questions in the manner that I have assessing an obligation of the Canadian governments to a disadvantaged community.

Hogg, Peter W. *Constitutional Law of Canada*, 5th ed. (Toronto: Thomson Carswell, 2008)

Professor Peter Hogg is a leading Canadian constitutional law authority and this text has achieved the status of being reflective of the state of law in Canada. Chapter 28 of this book, titled “Aboriginal Peoples” will serve as the anchor of the doctrinal discussion in this paper concerning the obligation to consult and accommodate. Whilst clearly stating the underlying principles and their origins in Canadian case law, this text does not present a complete survey of case law and is not an effective source of nuanced decisions with regards to the obligation. Nor, I suspect, was it intended to.

### ***Section 3. First Nations’ participation in offset projects and ownership of offsets***

#### **Secondary Sources**

##### Books

Freestone, David and Streck, Charlotte, eds. *Legal Aspects of Implementing the Kyoto Protocol Mechanisms: Making Kyoto Work* (Oxford: Oxford University Press, 2005).

This collection of essays surveys numerous issues associated with the three market mechanisms introduced by the Kyoto Protocol: the Clean Development Mechanism and Joint Implementation , both project based carbon credit creation mechanisms, and Emissions Trading. In some respects, this book is a precursor to Climate Finance. Charlotte Streck, one of the editors, is a contributor to

Climate Finance. The subject of carbon finance, though having its roots in the creation of emissions permits and their trading in a compliance context with NO<sub>2</sub> and SO<sub>2</sub>, has made the most significant advances in the context of the UNFCCC and the Kyoto Protocol. It is interesting to note that this book was published in 2005 and all of the collected papers were written before the Kyoto Protocol went live early in 2005. Much of the work reflects the ongoing commitment of the authors to the convention and the protocol and their commitment to their implementation. At the time of publication, the editors were both attached as legal counsel to the World Bank.

Kollmuss, Anja, Zink, Helge and Polycarp, Clifford, eds. *Making Sense of the Voluntary Carbon Market: A comparison of Carbon Offset Standards*, (Germany: WWF Germany, 2008)

This survey and comparison of elements of carbon offset standards is an instrumental work for carbon finance practitioners active in voluntary markets. Kollmuss and Polycarp worked for the Stockholm Environment Institute at the time of writing and Zink was employed with a Swedish business group active in carbon project development and trading. The work details and compares 10 different standards including the Clean Development Mechanism.

Websites

## ANNOTATED BIBLIOGRAPHY

Blind Justice: Does the law make vibrant civic spaces  
and social justice incompatible?

Geoff Ellwand

**Introduction:** I rely in part on the attached literature to examine the role the law has played in regulating negative public behaviours in urban spaces, primarily in Calgary and Vancouver. I look at the legislation, the case histories and some social history as well canvassing scholarly writing on the issues. I try to answer the question: Have the courts, the legal system and the legislators fairly balanced the competing interests of the dispossessed against the need for functional urban spaces. It's an important question, it involves the future of our cities and it measures how our society achieves justice and fairness for its most disadvantaged citizens.

### SECONDARY MATERIAL: ARTICLES

Ellickson, Robert. "Controlling Chronic Misconduct in City Spaces: Of Panhandlers, Skid Rows, and Public Space Zoning" (1996) 105 Yale L.J. 1165.

Robert Ellickson is Professor of Property and Urban Law at the Yale Law School where he has taught for more than 20 years. He has written extensively on issues surrounding urban space and property and how they connect with law and public order. In this frequently cited article Ellickson argues that public zoning should be used to control members of society who will not recognize normal social norms. It is not a popular position in the academic community but Ellickson has steadfastly maintained and developed his ideas.

Hardin, Garrett, "The Tragedy of the Commons" (1968) 162 Science 1243.

A challenging, controversial and widely influential article written by Garrett Hardin when he was a professor of biology at the University of California, Santa Barbara. He professes to apply scientific rationality to one of the key problems of public space, its misuse by the very public which own and perhaps depend upon it. Garrett in a thought experiment demands that the reader think about the necessity of communal places and concludes only regulation in some guise will prevent destruction, not only of the commons but of society in general.

Pildes, Richard H. "The Destruction of Social Capital Through Law" (1996) 144 U. Pa. L. Rev. 2055.

Richard Pildes engages in the lively debate over order in the public square, versus freedom and social obligation. In this 1996 article the Michigan Law School professor stakes out a middle ground suggesting the relationship between social norms and the law is more complex than portrayed by many critics. He points to the dangers of confusing personal preferences and social norms and of course the difficulty in establishing exactly what are social norms. He warns that the injudicious application of laws can end up diminishing the social norms the policymakers hoped the laws would protect.

Teir, Robert. "Maintaining Safety and Civility in Public Spaces: A Constitutional Approach to Aggressive Begging" (1993) 54 La. B.J. 287.

This article comes not from an academic but from a practicing US lawyer. Robert Teir at the time was General Counsel of the American Alliance for Rights and Responsibilities. His article is now somewhat dated but it nevertheless gives a good insight to the thinking that developed in the United States in the 1980s and 1990s about using the law in an attempt to control the streets and move unwanted elements to other places, though exactly where is never detailed.

Waldron, Jeremy. "Homelessness and community" (2000) 50 U.T.L.J. 371.

**Jeremy Waldron** is a Professor at New York University School of Law, where he teaches legal and political philosophy. He is a leading liberal thinker on the issues of jurisprudence and political theory. He is the author of several important books and dozens of articles including this one which goes to the heart of the legal, social and philosophical issues surrounding homelessness and the lives of those who live on the street. In this essay, which is published several years after the collection of essays on the same issue listed below, Professor Waldron seems to have strengthened his position that the conflict between homelessness and healthy urban spaces is not answered by more regulation but rather by fundamental social reform.

## SECONDARY MATERIALS: BOOKS

Arnold, Matthew. *Culture and Anarchy* 3rd ed. (New York: The Bobbs-Merrill Company Inc. 1971).

A famous and influential series of essays written by the poet, education reformer and social critic in 1866, a time of great economic and cultural upheaval in Britain. It remains for modern minds a sharp reminder that the issues surrounding competition for public space are nothing new, and that solutions based on crackdowns and strong laws have an immediate appeal (to property owners) but offer few lasting solutions. It should be noted that the threat Matthew Arnold sees comes not from the dissolute and the despairing but from the rising and increasingly assertive working class. The social construction of 21<sup>st</sup> Century Britain would suggest his fears were well grounded.

Clement, Dominique. *Canada's Rights Revolution* (Vancouver: UBC Press, 2008).

Dominique Clement is a professor of sociology at the University of Alberta. In this book he looks at the history of various reform movements in Canada, I find particularly interesting his history and analysis of both the British Columbia Civil Liberties Association and the Canadian Civil Liberties Association. While his treatment seems largely sympathetic and fails to tackle the philosophical underpinnings of either organization, it does provide an interesting perspective on the way government acts, and how the executive needs an organized and determined body to challenge any excesses. He is particularly useful on plans by Vancouver City Council which tried to use the declaration of the *War Measures Act* in 1970 to sweep undesirables from the streets.

Gehl, Jan. *Life Between Buildings* (: New York: Van Nostrand Reinhold, 1987).

Jan Gehl is an architect, urban designer and academic based in Copenhagen. He has a worldwide reputation for his work on the interrelationship of public space and the built environment and the social consequences resulting from that interplay. This book is a frequently reprinted and updated classic first published in 1971. It remains a standard

reference in Architecture and Planning Schools around the world. Gehl helps lay the intellectual foundation for one of the primary assumptions of this essay: vibrant cities must have vibrant public spaces.

Ignatieff, Michael. *The Rights Revolution* (Toronto: House of Anansi Press, 2000).

Jacobs, Jane. *The Death and Life of Great American Cities* (New York: Random House, 1969).

Jane Jacobs was an American urban planner, writer and thinker. She spent the last 40 years of her life in Toronto where she helped lead the successful fight to stop the Spadina Expressway, a campaign now widely seen as instrumental in preserving Toronto's central neighbourhoods. This book, first issued in 1961, was sweepingly influential, especially among North American planners. Its advocacy of community and neighbourhood-based city planning was a stark rejection of the modernist approach. The modernists believed in major city renewal through the destruction of neighbourhoods and favoured a network of often elevated superhighways throughout modern cities. Jane Jacobs' ideas about the importance of community and how it can be achieved at street level remain valid and help inform any discussion about successful cities needing vibrant public spaces.

Kohn, Margaret. *Brave New Neighborhoods: The Privatization of Public Space* (New York: Routledge, 2004).

After spending much of her early career in the United States Margaret Kohn recently moved to the political science department at the University of Toronto. She has written several books and articles exploring the challenges of public space. In *Brave New Neighborhoods* she draws in part on the disparate views of Robert Ellickson and Jeremy Waldron to argue that while the privatization of civic space may solve the immediate problems of loitering and begging they are not successful in a broader social sense.

Mitchell, Don. *The Right to the City: social justice and the fight for public space* (New York: Guilford Press, 2003).

Don Mitchell is a professor of Geography at Syracuse University who has written widely on culture and public space. In this book he argues in an often challenging way that the right to the city and its public spaces is being lost by the homeless and as a consequence all society is diminished. He deals, in an American context, with some of the key issues this essay seeks to engage: the battle for public space and the need for social justice. In this book he joins theoretical arms with Jeremy Waldron in taking issue with Professor Ellickson's advocacy of public zoning to create semi-private areas in which "community norms" are enforced.

Stamp, Robert. *Suburban Modern, Postwar Dreams in Calgary* (Calgary: Touchwood Editions, 2004)

In this short book, Robert Stamp a retired professor of education at the University of Calgary, offers an efficient survey of Calgary's post war suburban expansion and the ascendancy of the car as the dominant mode of transportation. While he does not directly address the issues of competition for urban space, he provides a valuable guide to the social backdrop which has led to the present state of Calgary's urban street life.

Thompson, Catharine Ward & Traviou, Penny. Eds., *Open Space: People Space* (London: Taylor & Francis, 2007).

Thompson is a professor in landscape architecture at Edinburgh College while Travlou is a research fellow at the Edinburgh College of Art. They have collected an interesting variety of views primarily on contemporary issues

surrounding British public space. It is a convenient if limited survey and provides a North American reader with some perspective. However, while it is produced by a scholarly publisher, its layout, its style and the brevity of most of the articles while making it accessible, leaves it somewhat lacking in scholarly heft.

Waldron, Jeremy. "Homelessness and the issue of freedom" in *Liberal Rights Collected Papers 1981-1991* (New York: Cambridge University Press, 1993).

## SECONDARY MATERIALS: MONOGRAPHS

City of Calgary, Community and Neighbourhood Services, Social Research Unit *Biennial Count of Homeless Persons in Calgary : 2008 May 14* (Socio-economic survey) (The City of Calgary: Community & Neighbourhood Services, Policy & Planning, 2008).

Stephen, Sir James. *A Digest of the Criminal Law* 5<sup>th</sup> ed. (London: Macmillan and Co., 1894).

This book is all about perspective, it offers an insight into the Victorian mind and a benchmark for modern law and the regulation of public space. It is a digest of late 19<sup>th</sup> century criminal law in Britain, a law which was paralleled in Canada. It offers the modern reader an extraordinary view of the way society once dealt with Vagrancy, Common Nuisance and Offences Against Morality and punished wrongdoers with penalties ranging through fines, hard labour and whipping. Most of these laws and punishments have now vanished. The modern reader is compelled to ask is our society now richer, fairer and freer and are our public spaces more secure and successful as a consequence.

## LEGISLATION

*Assistance to Shelter Act* Bill 18 - 2009

*Canadian Charter of Rights and Freedoms*, s 2(c), Part 1 of the *Constitution Act, 1982*, being Schedule B to the *Canada Act 1982* (U.K.). 1982. C. 11.

City of Calgary By-law No. 3M99, *By-law to Regulate Panhandling* (8 March 1999).

\_\_\_ By-law No. 5M2004, *By-law to Regulate Neighbourhood Nuisance, Safety and Liveability Issue* (3 May 2004).

\_\_\_ By-law No. 54M2006, *By-law to Regulate Public Behaviour* (20 November 2006).

*Municipal Government Act*, R.S.A. 2000 M-26.

*Vagabond and Beggars Act*, 1494 (U.K.), 11 Henry VII, c.2.

## JURISPRUDENCE

*Charkaoui v. Canada (Citizenship and Immigration)*, [2007] 1 S.C.R. 350.

*Committee for the Commonwealth of Canada v Canada*, [1991] 1 S.C.R. 139.

*New Brunswick (Minister of Health and Community Services) v. G.(J.)*, [1999] 3 S.C.R. 46.

*Pottinger v. City of Miami*, 810 F. Supp. 1551 (S.D. Fla. 1992)

*Reference re Public Service Employee Relations Act (Alta.)* [1987] 1 S.C.R. 313.

*Victoria (City) v. Adams*, 2008 BCSC 1363.

*Westendorp v. The Queen*, [1983] 1 S.C.R. 43.

# **Recommendations for a Legislative Model for a Renewable Energy Development Fund in China**

**Annotated Bibliography**  
**Compiled by Mingming Ni**

**LL.M Candidate, University of Calgary**

This bibliography is compiled as an assignment for the course Law 703, but is also aimed to assist me in the research for the major research paper “Recommendations for a Legislative Model for a Renewable Energy Development Fund in China.”

The objective of my major paper is to offer suggestions on how to set up a renewable energy development fund in China in order to promote the development of renewable energy. Therefore, the major research paper will first critically analyze the current legislation related to renewable energy in China, then examine previous financing methods used in electricity industry in China and typical funding systems in renewable energy in other countries, and finally give legislative recommendations for establishing a funding system in China.

All the relevant materials in this bibliography can be divided into two sections. Section I is devoted to analyze the current regulations on renewable energy in China, which includes the related regulations and literatures of introduction and evaluation on them. Section II contains literatures that address previous financing methods used in promoting electricity development in 1980's and 1990's in China and typical funding systems in renewable energy in other countries.

## **SECTION I**

### **I PRIMARY SOURCES**

#### **LEGISLATION**

中华人民共和国可再生能源法 [People's Republic of China Renewable Energy Law] (China), 2005 [translated by author].

People's Republic of China Renewable Energy Law came into effect on January 1, 2006, which is the first and only statute in China to regulate various issues in renewable energy. Articles directly related to the major research paper mainly include Article 2, Article 19 and Article 24.

电力建设基金征收使用监督管理办法 [Management of Collecting and Using Electricity Construction Fund] (China), 1996 [translated by author].

Management of Collecting and Using Electricity Construction Fund came into effect on January 1, 1996 in China. According to this regulation, Electricity Construction Fund is authorized and managed by State Council. The financing method for this fund is to collect two cents per kilowatt-hour electricity from every end-user. The raised fund is aimed for the projects of building power stations and infrastructures in electricity field.

### **II SECONDARY SOURCES**

#### **BOOKS**

Li, Junfeng & Zhongyin Wang. (李俊峰 & 王仲颖), *中华人民共和国可再生能源法解读 (Interpretation of Renewable Energy Law in China)* (Beijing: 化学工业出版社 [Chemical Industry Press], 2005) [translated by author].

The book elaborates on the development potential of renewable energy in China and then interprets People's Republic of China Renewable Energy Law from the perspective of legislative principles, basic requirements, and main systems. In addition, the book combs relevant laws and regulations in China. The book is aimed to offer a basic and comprehensive understanding of People's Republic of China Renewable Energy Law.

## ARTICLES

Liu, Xiaobing & Zhiyu Zhang. (刘小冰 & 张治宇), “我国新能源与可再生能源立法的检讨与完善” (“Criticism and Perfection of People’s Republic of China Renewable Energy Law”) (2007) 3 南京工业大学学报 (Journal of Nanjing Technology University) 53 [translated by author].

The article gives an objective evaluation on People’s Republic of China Renewable Energy Law and its legal effects. One problem in renewable energy legislation mentioned in this article is excessive government intervention. To perfect renewable energy legislation, an effective financing system should be provided. The analysis of existing problems in renewable energy legislation is helpful for the major research paper.

Ren, Dongming & Minzheng Zhang. (任东明 & 张正敏), “论中国可再生能源发展的主要问题以及新机制的建立” (“Main Issues of Renewable Energy Development in China and Establishment of New Mechanism”) (2003) 4 可再生能源 (Renewable Energy) 21 [translated by author].

The article explicitly points out there are many barriers in the development of renewable energy in China. To solve these problems, legislation is necessary, and then new mechanism based on legislation should be established. Some ideas about how to establish the new mechanism to promote renewable energy’s development in China can be borrowed for the major research paper. For instance, the author thinks different financing methods can be combined in order to promote renewable energy.

Shi, Lianzhi. (师连枝), “我国发展可再生能源的障碍及对策” (“Barriers and Countermeasures to the Development of Renewable Energy in China”) (2007) 2 河南社会科学 (Henan Social Sciences) 45 [translated by author].

The article firstly analyzes the barriers in the development of renewable energy in China, focusing on the incomplete legal system. Then it explains how to promote the development of renewable energy in China. One of the countermeasures is to establish a special funding system. Although the author does not seem to offer concrete solutions, some of the ideas in the article, such as providing preferential taxation, are worth examining.

## REPORTS

Asian Development Bank, *Proposed Multitranche Financing Facility and Administration of Grant from the Clean Energy Fund People’s Republic of China: Guangdong Energy Efficiency and Environment Improvement Investment Program* (N.p., 2008).

The report is aimed at getting a loan from Asian Development Bank to finance an efficiency power plant (EPP) in Guangdong province in China. As a feasibility study report of the investment project, it analyzes multiple benefits of energy saving, risks, assumptions, financial management, etc. However, it does not provide suggestions on how to improve energy efficiency from technology perspective. If the investment is approved and carried out successfully, the EPP model will become a pilot in China, but the model only can be replicated in other high energy consuming provinces.

He, Jiankun & Jiangping Xiao. (何建坤 & 肖江平), *可再生能源立法研究与论证报告 (Renewable Energy Legislative Research and Demonstration Report)* (N.p., 2004) [translated by author].

Different from the report following, this one is not from an official agency, but from the Energy Research Institute in Tsinghua University. The report addresses how to structure renewable energy law in China from a scholarly perspective. Some general accepted renewable energy systems in other countries are analyzed, such as feed-in-tariff and System Benefits Charges (SBC). The authors offer some practical suggestions on how to promote the development of renewable energy in China. Although some of them, such as Public Benefit Fund and Renewable Portfolio System, are not used in People's Republic of China Renewable Energy Law, they are still useful for today's reconsideration.

National Energy Administration (国家发展和改革委员会能源局), *可再生能源立法研究报告 (Research Report on Renewable Energy Legislation)* (N.p., 2004) [translated by author].

This authoritative report is a project summary of legislative study on renewable energy legislation in China. The report contains five parts: China's energy consumption status, the importance of renewable energy in China, the problems and conflicts in energy development, basic legislative problems in renewable energy, and the relation between renewable energy legislation with other regulations. Although the report is published before People's Republic of China Renewable Energy Law came into effect, it still can offer a good understanding of the renewable energy macropolicy in China. Moreover, some statistics in the report can be used in the research paper.

## **SECTION II**

### **I PRIMARY SOURCES**

#### **LEGLISTAION**

河北省电力需求侧管理专项资金管理办法 [Management of Demand Side Management (DMS) in Electricity Supply in Hebei Province] (China), 2003 [translated by author].

Management of Demand Side Management (DMS) in Electricity Supply in Hebei Province is a local regulation. The local government plans to redistribute the surcharges of using electricity in order to extract special funds to promote research and technical innovation in electricity field.

### **II SECONDARY SOURCES**

#### **BOOKS**

Freris, Leon & David Infield. *Renewable Energy in Power Systems* (Chichester: John Wiley&

Sons, Ltd, Publication, 2007).

This book focuses on green electricity, which means electricity generated from renewable energy sources. The book offers a comprehensive understanding of how green electricity is generated and commercialized. Chapter 2 and Chapter 7 are especially useful for the major research paper. The former explains the characteristics of conventional and renewable energy generators. The latter addresses the economics and trading of green electricity in national and international markets. It provides introductory information on feed-in-tariff system, quote system, carbon tax.

Geller, Howard S. *Energy Revolution: Policies for a Sustainable Future* (Washington DC: Island Press, 2002).

This book firstly indicates that renewable energy should be promoted in order to develop sustainably. In chapter 2, the book analyzes the barriers in promoting renewable energy, such as lack of money and financing, high cost and limited supply infrastructure and so on. Consequently, policies of different countries to solve the barriers are introduced. Chapter 5 is extremely important since it explains policies taken in the United States and their effects, including the System Benefit Charges (SBC).

Mndonca, Miguel. *Feed-in Tariffs: Accelerating the Deployment of Renewable Energy* (Gateshead: MapSet Ltd, 2007).

The author addresses the issue of feed-in tariffs in details, which is a renewable energy law that obliges energy suppliers to buy electricity produced from renewable resources at a fixed price. The book, especially the chapter on Germany's policy, helps the readers to understand how feed-in tariffs can quickly shift the world's electricity generation to renewable sources of energy. The author argues that the policy should be implemented worldwide. However, other alternatives, such as the quota model and the tendering system should not be prejudiced, and the practical conditions in different countries should be considered.

## ARTICLES

Geller, Howard *et al.* "Policies for Advancing Energy Efficiency and Renewable Energy Use in Brazil" (2004) 32 *Energy Policy* 1437.

The article focuses on energy issues in developing countries. The author firstly reviews energy trends and energy policy objectives in Brazil, which includes diversifying energy supplies, reducing the import dependence and cutting inefficiency and energy waste. Moreover, the author explores 12 policy options for advancing energy efficiency and renewable energy used to meet the above objectives. However, the author fails to analyze the policies in details. As a developing country, China has the same objectives and can integrate the useful policies into a new mechanism to promote the development of renewable energy.

Liu, Zhiping & Zhiping Qin. (刘志平 & 秦志平), "我国节能可再生能源专项资金评价" ("Evaluations of Special Funds for Renewable Energy in China") (2005) 27 *中国能源* (China Energy) 28 [translated by author].

Based on the investigations of existing or once established special fund for energy conservation and development, this article describes the purpose, application and effects of these funds and then conducts assessment on them. Finally, it proposes recommendations for

establishing a public benefit fund for renewable energy in China. The article offers a general introduction on previous financing practice in China. It clearly explains how these funds are attained, managed and allocated.

Mitchell, Catherine & Peter Connon. “Renewable Energy Policy in the UK 1990-2003” (2004) 32 Energy Policy 1935.

In the article, the author firstly gives a description of renewable energy policy in UK from 1990 to 2003, and then details three case studies to illuminate the inconsistent and ill-thought-out renewable energy policy in UK. The author claims UK government should learn from the past and put forwards matching policy in order to fulfill the aim of cutting carbon emission. UK’s experience, such as not ignoring legal barrier and the harmony between the previous and later policies, also benefits policy makers in China to construct a new mechanism.

Wang, Jingmin & Liping Wang. (王敬敏 & 王李平), “河北省电力需求侧管理专项资金运作机制研究” (“Study of the Operating Mechanism of Special Funds for Demand Side Management in Hebei Province”) (2007) 1 电力需求侧管理 (Management of Demand Side Management) 24 [translated by author].

The article points out the importance of Demand Side Management (DSM) in Hebei province and discusses the operation of DSM mechanism in detail. The regulations for financing channel, management and distribution of fund in the operating mechanism are worthy to be analyzed and can be used as a source of reference to offer recommendations for building a Renewable Energy Development Fund in China.

Zheng, Yan. (郑研), “美国、欧盟、中国绿色电力产业政策比较分析” (“Comparative Analysis of Green Electricity Policy in the United States, European Union and China”) (2006) 2 电力政策研究 (Electricity Policy Research) 41 [translated by author].

The article defines green electricity and its benefits, comparing with electricity generated by coal at first. Then it illustrates many policies carried out in the United States and some EU countries since 1970’s. The article offers a basic introduction of these policies, their functions and effects.

Zhuang, Xin. (庄辛), “国外建立节能和可再生能源发展基金的经验” (“Experiences of Establishing Renewable Energy Development Fund in Foreign Countries”) (2005) 3 世界经济 (World Economy) 56 [translated by author].

The article provides an good summary of other contries experiences of different funding systems to promote renewable energy. It analyzes different funding systems concerning the following aspects: legislative background, financing mechanism, managment and monitoring systems. Finally, it offers some suggestions on how to establish a funding system in China based on the analysis above. However, the suggestions are too abstract to be practical.

## **REPORTS**

IEA, World Energy Outlook (N.p., 2008).

This is an annual report from International Energy Agency (IEA), which aims to answer burning question in energy field. World Energy Outlook 2008 provides new energy projections in energy markets to 2030, region by region and fuel by fuel, incorporated with latest data and policies. Therefore, the report can offer the most authoritative and latest information in energy field.

### **NEWS ARTICLES**

“Insight on Renewable Energy Law in Germany” *Sohu News* 17 June, 2009 online: The Sohu Group <<http://finance.sina.com.cn/leadership/mroll/20090617/18216363228.shtml>>.

### **INTERNET SOURCES**

American Council for an Energy-Efficient Economy (ACEEE)

<http://www.aceee.org/briefs/mktabl.htm> ACEEE is a nonprofit, organization dedicated to advancing energy efficiency.

Center for European Policy Study

<http://www.ceps.be/home> The website is a leading forum for debate on EU affairs.

Clean Energy States Alliance

<http://www.cleanenergystates.org/case.html> The website offers a series of case studies to report on the early experience of the state funds.

Database of State Incentives for Renewable & Efficiency (DSIRE)

<http://www.dsireusa.org> DSIRE is a comprehensive source of information on state, local, utility, and federal incentives and policies that promote renewable energy and energy efficiency.

Towards a Comprehensive Framework for Sustainable Development of Gas: Lessons for  
Nigeria

Annotated Bibliography

Compiled by Orieji Kalu Onuma

LL.M. Candidate, University of Calgary

This web page contains selected sources of information, relevant to my LL.M. thesis research at the University of Calgary. My research focuses on the development of a comprehensive legal and regulatory framework for sustainable development of gas in Nigeria, with lessons drawn from the environmental protection and conservation regime in gas development in Alberta, Canada. The issue of gas flaring, absence of an effective regulatory framework, ready markets, financing and pricing constraints, enforcement challenges, lack of technology and sole reliance on development of natural resources as the means of economic growth, among other things, makes the concept of sustainable development key for Nigeria.

For the purposes of my thesis, sustainable development of gas will be narrowly defined to refer to the establishment of a regulatory framework for exploration and production of gas vis-a-vis conservation of supply and environmental protection. This thesis will identify sustainable criteria against which the regulatory regime for development of natural gas in Nigeria sustainable development can be assessed. Nigerian laws and the laws of the province of Alberta will be accessed against this background and

recommendations and ideas for reform will be adopted contextually, taking the theories of legal transplant into account.

This annotated bibliography is divided into four broad headings namely, Jurisprudence, Legislation, under which the legislation, subsidiary and draft legislation of Nigeria, and the legislation of the province of Alberta are considered, Secondary Materials, under which book, chapters in books, articles, thesis and dissertations are considered and lastly, Other Materials consisting of web links and websites.

Please note that this annotated bibliography is a work in progress and is not, by any means, exhaustive.

## ANNOTATED BIBLIOGRAPHY

### LEGISLATION, SUBSIDIARY LEGISLATION AND REGULATIONS

#### NIGERIA

#### LEGISLATION

The Constitution of the Federal Republic of Nigeria, Laws of the Federation of Nigeria 2004, c. C 23.

This legislation is the supreme law of Nigeria. It sets out legislative, executive and judicial powers and the division of legislative among the federal units that is the federal government, the states and the local governments. The Constitution vests the entire property in and control of all minerals, mineral oils and natural gas in and under any land in Nigeria, its territorial waters and the Exclusive Economic Zone in the Federal Government of Nigeria. The Constitution also sets out fundamental principles and objectives of the government to include the promotion of planned and balanced economic development, the management of material resources and the exploitation of natural resources for the common good and the protection of the environment. These fundamental principles, unlike other sections of the Constitution however, are not justiciable, that is, they cannot be enforced in a court of law. These provisions are pivotal for my research in determining ownership of, and legislative powers over, natural gas and to determine if Nigeria's Constitution takes sustainable development into account. The court's decision in the *Gbemre v. Shell* case discussed below, where it was decided that gas flaring is unconstitutional and an infringement of the constitutionally guaranteed right provides another angle for consideration in my review of the Constitution.

The Petroleum Act of 1969, Laws of the Federation of Nigeria 2004, c. P 10.

This is the key legislation that regulates oil and gas in Nigeria. Its key provisions relate to oil, but gas is legislated alongside oil as the definition of petroleum in the Act, includes natural gas. The gas specific provisions relate to a pricing regime for gas and the government's right to gas free of cost at flare. Its environmental protection provisions are under the general powers given to the minister to make regulations. The draft Petroleum Industry Bill, which is under review at the National Assembly of Nigeria, contains more gas specific provisions and makes provisions for Gas Mining Leases and Gas Prospecting Leases.

The Associated Gas Reinjection Act 1979, Laws of the Federation of Nigeria 2004, c. A 25.

The Act imposes a mandatory requirement on all oil producing companies to submit detailed programmes and plans for either the implementation of programmes relating to the re-injection or viable utilization of all produced associated gas. It sets the limit of October to April 1980 for the oil companies to develop gas utilization projects. It also sets 31 December 1984 as end date for the oil companies to stop gas flaring, or face fines. The provisions of this Act have been augmented by several regulations, which have either extended the deadline or imposed new fines. The Act has not succeeded in bringing gas flaring in Nigeria to an end. The Act also focuses solely on utilization of gas by way of re-injection. It does not contain any environmental protection provisions. This is one of the key legislation that will be considered in my project with respect to legislative efforts that have been made to utilize gas in Nigeria.

The Environmental Impact Assessment Act, Laws of the Federation of Nigeria 2004, c. E12.

This Act makes it mandatory for development projects with potential environmental effect to undergo an environmental impact assessment (EIA) prior to their commencement. The requirement for an EIA is one of the recognized principles of sustainable development. The provisions of this Act would be considered in determining the environmental regulatory efforts Nigeria has taken, or is taking, to develop its gas sustainably.

The Federal Environmental Protection Agency Act, Laws of the Federation of Nigeria 2004, c. F 10. (FEPA) (Now repealed).

This Act set up an agency, which had the overall responsibility for a comprehensive system of environmental management in Nigeria. This Act adopted a general approach to environmental regulation and, as such, was not effective in terms of achieving strict compliance by multinational companies in ensuring a sustainable exploitation of Nigeria's petroleum resources. This Act has now been repealed by the National Environmental Standards Regulatory and Enforcement Agency (Establishment) Act of 2007. Its provisions will be considered briefly in providing a historical overview of the regulatory efforts made to protect Nigeria's environment.

The National Environmental Standards Regulatory and Enforcement Agency (Establishment) Act of 2007 (NESREA).

This is the primary environmental protection law in Nigeria. The Act sets up an agency whose main role is the regulation and enforcement of environmental standards. Following an initial review, the Act appears to follow the approaches

of the past, namely the repealed FEPA, which yielded little or no results. The provisions of this Act will be considered to determine if it is materially different from the FEPA. It will also be reviewed as part of the regulatory efforts made to protect Nigeria's environment.

Oil Pipelines Act, Laws of the Federation of Nigeria 2004, c. O7.

This Act makes provision for licenses to be granted for the establishment and maintenance of pipelines for use by oilfields and oil mining companies. It defines a pipeline as one used for the conveyance of mineral oils, natural gas, any of their derivatives or components, and also any substance to be used in their production refining or conveyance. While this Act relates to the downstream sector, which is outside of the purview of my proposed research, it would be mentioned briefly among the general laws that regulate oil and gas in Nigeria.

Oil in Navigable Waters Act, Laws of the Federation of Nigeria 2004, c. O6.

This Act domesticates and gives effect to provisions of the International Convention for the Prevention of Pollution of the Sea by Oil 1954 to 1962 in Nigeria. The provisions of this Act cover prohibition of discharge of certain oils into sea areas, designation of prohibited sea areas, discharge of oil into the waters of Nigeria, equipment in ships to prevent oil pollution, penalties for offences, enforcement and application of fines among others. This Act is implemented by the Oil in Navigable Waters Regulation No 101 of 1968. This Act, which is limited to oil pollution of domestic and international waters, does not fall within the purview of my proposed research. Nevertheless, it is useful for purposes of comparism or highlighting the absence of law(s), which should control or regulate emissions that result from gas flaring or production activities into the atmosphere.

#### SUBSIDIARY LEGISLATION

The Petroleum (Drilling and Production) Regulations (made pursuant to the Petroleum Act of 1969).

These regulations are made under the general powers given to the Minister under the Petroleum Act. Of particular interest is Regulation 42 of the Regulations, which mandated oil-producing companies working oil fields to deliver to the Minister of Petroleum, programs for the utilization of associated gas discovered in their fields within 5 years of putting such fields into production. These regulations will be considered in providing an overview of regulatory efforts to utilize gas in Nigeria.

The Associated Gas Re-Injection (Continued Flaring of Gas Regulations) No 43 of 1984.

The Associated Gas Re-Injection (Continued Flaring of Gas) Regulations amended the existing legislation that is, the Associated Gas Re-Injection Act. The regulations also provided limited exemptions for flaring in certain circumstances. They set out conditions that oil companies must fulfill to qualify for a certificate to be issued by the Minister under Section 3(2) of the Associated Gas Re-Injection Act 1979 for the continued flaring of gas in a particular field or fields. The regulations will be reviewed as part of the process to trace the regulatory efforts to stop gas flaring and encourage utilization in Nigeria.

The Associated Gas Re-Injection (Continued Flaring of Gas Regulations) 1985.

These 1985 regulations amended the 1984 regulations by fixing the fine for flaring gas at 2 Kobo (equivalent to US\$0.0009 in 1985) for each 1000 standard cubic feet (scf) of gas flared. These regulations will be reviewed as part of the process to trace the regulatory efforts to stop gas flaring and encourage utilization in Nigeria.

The Associated Gas Re-Injection (Continued Flaring of Gas Regulations) 1990.

These regulations reviewed the initial flare penalty of 2 kobo imposed by the 1985 regulations to 50 kobo per 1000scf. These regulations will be reviewed as part of the process to trace the regulatory efforts to stop gas flaring and encourage utilization in Nigeria.

The Associated Gas Re-Injection (Continued Flaring of Gas Regulations) 2000.

These regulations reviewed the subsequent flare penalty of 50 kobo imposed by the 1990 regulations to N20 (Twenty Naira) per 1000scf. These regulations will be reviewed as part of the process to trace the regulatory efforts to stop gas flaring and encourage utilization in Nigeria.

Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN) (Issued by the Department of Petroleum Resources, (DPR) (Lagos, 1991, Revised in 2002).

These regulations are made pursuant to Section 8(i) (b) (iii) of the Petroleum Act of 1969, which gives the Minister power to make regulations for the prevention of pollution of watercourses and the atmosphere. These regulations specifically deal with the control of pollutants and pollution from the various aspects of petroleum operations including exploration, production, processing, terminal operations, hydrocarbon processing plants, oil and gas transportation and marketing. These regulations are very detailed and include discussions on the characteristics and

sources of wastes generated by petroleum operations. They prescribe control methods, environmental protection and effluent emission standards applicable to companies operating in Nigeria's petroleum sector. Even though the foreword states that the intention is for the regulations to be revised periodically, when new knowledge becomes available, these regulations, originally issued in 1991, were last revised in 2002. Additionally, even though these regulations have been in force since 1991, it is difficult to determine their impact vis-a-vis the state of the Nigerian environment. An initial review shows that their enforcement requires technical knowledge and expertise that the officers of the DPR may not possess. Also, the sanctions provisions are not very punitive, either in terms of fines or prison sentences. These regulations will be reviewed as part of the regulatory efforts made to protect Nigeria's environment, and in this case, specifically from oil and gas sector pollution.

#### DRAFT LEGISLATION

Draft Petroleum Industry Bill. National Assembly of Nigeria website, online: <<http://www.nassnig.org/>>.

This is a bill for an Act to establish the legal and regulatory framework, institutions and regulatory authorities for the Nigerian petroleum industry. This bill will also establish guidelines for the operation of the upstream and downstream sectors. It is currently being reviewed and debated by stakeholders and lawmakers. It is expected that this draft Bill when passed would provide a more comprehensive, integrated and modern approach to regulation of oil and gas in Nigeria. There are indications that this Bill maybe passed by December 2009. This Bill will be considered as part of the laws that regulate petroleum operations in Nigeria.

Draft Gas Flaring Reduction Bill. National Assembly of Nigeria website, online: <<http://www.nassnig.org/>>.

The objective of this Bill is to put an end to environmental hazards posed by gas flaring, reduce health hazards and minimize economic wastage. This Bill was recently passed by the Nigerian Senate and is awaiting concurrence at the House of Representatives. Section 1 of the draft Bill prohibits the flaring of natural gas in any oil and gas production operation after the commencement of the Act. Section two specifically prohibits the flaring of associated or non-associated gas after December 2010. This bill appears to be the solution to Nigeria's gas flaring challenge. However, in the light of the failures of past legislation, it is doubtful that the mere passage of this Act alone will put an end to Nigeria's gas flaring. The environmental regulations would have to be strengthened and enforcement, which has always been a challenge, would need to be addressed. This Bill will be considered as part of the laws that regulate gas utilization in Nigeria.

## ALBERTA, CANADA

The Mines and Minerals Act, R. S.A. 2000, c. M-17.

This Act regulates the administration and exploitation of mines, minerals and related natural resources within the province of Alberta. It sets out the regime for the granting of leases and licenses for oil and natural gas exploitation. It sets out the applicable tenure, rights of the license or leaseholders and the regulations that govern them. This Act performs a function similar to that of Nigeria's Petroleum Act with respect to the authorization by government to undertake petroleum activities. This Act is, however, not limited to petroleum operations like Nigeria's Petroleum Act. In Nigeria, the Mining Act regulates other mining activities outside of petroleum. This Act is one of the laws of the province of Alberta that would be reviewed in light of identified sustainability criteria to provide a basis for comparative analysis with Nigeria's oil and gas regime.

The Environmental Protection and Enhancement Act, R.S.A. 2000, c. E-12.

This Act was enacted to support and promote the protection, enhancement and wise use of the environment. This Act was promulgated in cognizance of the importance of environmental protection, the need to balance economic growth and prosperity with the environment, the principle of sustainable development in terms of preserving resources for future generations and mitigating the environmental impact of development and government policies among others things. From an initial review, this Act appears to be very detailed. It identifies the various areas to be protected, classifies them in categories and deals with each of them extensively. It performs a function similar to that of Nigeria's NESREA with several fundamental distinctions. The function of the NESREA, first and foremost, is to set up a regulatory agency for the protection of the environment. Its provisions are set out in terms of the functions of that agency and are couched in very general terms. Again, this Act has sustainable development, as one of its listed purposes. It sets up Sustainable Development Co-coordinating Council. The Nigerian NESREA was not promulgated with these objectives. This Act is one of the laws of the province of Alberta that would be reviewed in light of identified sustainability criteria to provide a basis for comparative analysis with Nigeria's oil and gas regime.

The Energy Resources Conservation Act, R.S.A. 2000, c. E-10.

This Act was enacted to achieve several purposes. Chief among its objectives, are the need to appraise the reserves and production capacity of energy resources, effect the conservation and prevention of waste of energy resources, control pollution, ensure environment conservation and secure observance of safe and efficient practices in the exploration, processing, development and transportation of energy resources and energy. This Act, which sets up the Energy Resource Conservation Board, lies at the very centre of Alberta's conservation regime. It is one of the Acts that would be reviewed in my thesis. Its scope covers development and transportation. However, for the purpose of my thesis, I will limit my review to conservation as it applies to the development of natural gas.

The Gas Resources Preservation Act, R.S.A. 2000, c. G-4.

This Act sets out the regime for granting permits to remove natural gas or propane from Alberta to designated persons. The Act sets out the terms and conditions under which the permits are granted among other things. It forms part of the conservation regime under Alberta's laws. I will find the provisions of the Act on conservation very useful for my thesis.

The Oil and Gas Conservation Act, R.S.A. 2000, c. O-6.

This Act was enacted to achieve several purposes. Chief among these are to effect the conservation and prevent the waste of Alberta's oil and gas, secure the observance of safe and efficient practices in oil well and facilities operations, provide for economic, orderly and efficient development of the oil and gas resources and control pollution from oil and gas operations among other things. This is one of the legislations that set out the conservation regime in Alberta and more particularly, deals with the conservation of oil and gas, which is one of the main thrusts of my proposed research. This Act would be reviewed in light of identified sustainability criteria to provide a basis for comparative analysis with Nigeria's oil and gas regulation regime.

The Climate Change and Emissions Management Act, S.A. 2003, c. C16.7.

The purposes of the Act can be gleaned from the preamble. The preamble, provides amongst other things that the Act was enacted in recognition of the government's commitment to protect Alberta's environment for future generations, to manage the exploration, development and production of renewable and non renewable resource, the world wide recognition for leading edge innovation in environmentally sustainable technologies that maximize the value of Alberta's natural resources and the protection of Alberta's environment by the management of emissions of carbon dioxide, methane and other specified gases

among other things The Act sets out the regime for emissions control including but not limited to setting emission targets, stipulating how these will be met and setting up a fund to ensure this. This Act seeks to protect the environment by imposing emission limits. Other than the EGASPIN, Nigeria does not have a specific legislation that seeks to achieve this same objective. This Act will be reviewed in light of identified sustainability criteria to provide a basis for comparative analysis with Nigeria's oil and gas regulation regime.

## JURISPRUDENCE

*Gbemre v. Shell Petroleum and Development Company Ltd.* Unreported Suit No FHC/B/CS/53/05. The officially certified full-text of the judgment in this case can be found at <<http://www.climatelaw.org/cases>>.

Mr. Gbemre instituted this case in a representative capacity, for himself and for each and every member of the Iwehereken community in Delta State Nigeria against Shell Petroleum and Development Company, Nigeria, the Nigerian National Petroleum Corporation (NNPC) and the Attorney General of the Federation. The plaintiff was asking among others things, for a declaration that the right to a clean and healthy environment, was an extension of the constitutional rights to freedom to life and dignity, a declaration that the continued flaring of gas was a violation of these fundamental rights and that the provisions of the Associated Gas Re-Injection Act that allow for gas flaring are inconsistent with the constitutionally guaranteed right to life. In the judgment passed on 14th November 2005, the Federal High Court of Nigeria sitting in Benin, ordered that gas flaring must stop in the Niger Delta community as it violates guaranteed constitutional rights to life and dignity. Justice C. V. Nwokorie ruled that the damaging and wasteful practice of flaring cannot lawfully continue. This ruling, by extension, makes it clear that gas flaring by oil exploration companies is illegal. This case set precedent, as it is the first known case where the courts have declared gas flaring illegal and a breach of human rights. The earlier approach had always been to award financial compensation in the rare cases where the courts found for the plaintiff. The decision is evidence of a shift in judicial attitude, from placing a greater premium on revenue from petroleum exploration and exploitation activities, over environmental protection. The judgment sadly was never enforced. This makes it evident that the Nigerian judiciary still has a long way to go, and the problem of enforcement is a major challenge to sustainable development of resources in Nigeria.

## SECONDARY MATERIAL: BOOKS

Ayoade, Morakinyo Adedayo. *Disused Offshore Installations and Pipelines: Towards "Sustainable Decommissioning"* (The Hague, Netherlands: Kluwer Law International, 2002).

The author is a law lecturer at the University of Lagos and a legal consultant with Bayo Osipitan & Co. His expertise covers the fields of oil and gas, mining, electricity, arbitration and international trade. This book provides a comprehensive overview of international law, national regulations and industry practices associated with decommissioning offshore installations and pipelines from a sustainable development perspective. I am particularly interested in chapter six which deals with the sustainable decommissioning theory. My interest here is limited to the ideas and the recommendations provided, as well as the consideration of sustainable development as it applies to the oil and gas sector. This book will provide a useful tool for research primarily based on decommissioning. However, for my purposes, chapter six provides an excellent resource for background information on sustainable development and ideas for reform.

Cordonier Segger, Marie-Claire & Ashfaq Khalfan. *Sustainable Development Law* (Oxford UK: Oxford University Press, 2004).

The authors are both renowned and accomplished academics. Marie-Claire Cordonier Segger was among other things, a director of the Center for International Sustainable Development Law (CISDL). She lectured in law at the International Development Law Organization, the United Nations Environment Program, the United Nations Economic Commission for Latin America and the Caribbean, and at several universities. Ashfaq Khalfan was at the time of publication, a director of the CISDL. At the CISDL, he initiated the Human Rights and Poverty Eradication Programme. He has published on a range of topics that include sustainable development amongst other things. The main objectives of this book are to advance the understanding of sustainable development law. The book achieves this by examining the concept of sustainable development, key aspects of international treaties that touch on this subject matter, the principles of sustainable development, and identifying areas for further research. This book traces the origins of sustainable development, considers its application in development law and policy, does an in-depth examination of the principles of sustainable development as identified by the New Delhi Declaration of 2002, addresses implementation challenges and more particularly examines sustainable international natural resources law among others. This book serves as a useful material and a guide to scholars of sustainable development in both developed and developing countries as it cuts across aspects of environmental protection, economic progress and social development. Its chapters are well researched, detailed and provide a lot of useful background and substantive information. This

book was published in 2004, thus necessitating the need to consult more up-to-date texts that address recent positions in sustainable development law. This book will be useful for my review of literature on sustainable development and in the substantive body of my work.

Kuokkanen, Tomas. *International Law and the Environment: Variations on a Theme* (The Hague, Netherlands: Kluwer Law International, 2002).

The author was working as a Counselor with the Ministry of Environment, Finland at the time of publication of this book. This book addresses the development of international environmental law over three periods namely the traditional period, the modern era and the post-modern era. My review will focus on the postmodern era and some of the ideas set out there. The author states that the post –modern era approach to international environmental law evolved to deal with new environmental threats that the modern approach was too elementary to deal with. The approaches of the post modern era include a proactive approach, that is preventing pollution at source by prescribing processes and clean production methods which prevent pollution. Another approach adopted in this era is the precautionary or risk management approach. The author also examines the concept of using cost effective environmental measures and economic incentives or disincentives to advance environmental protection. These ideas are useful in a law reform context and are similar to the ideas put forward by David Pearce and Kerry Turner in their book, the *Economics of Natural Resources and the Environment*. This chapter offers useful suggestions/ recommendations that can be adopted for purposes of reform of laws that regulate environmental protection in Nigeria.

Mankabady, Samir. *Energy Law* (London: Euromoney Publications Plc, 1990).

The author, a Professor of Law and former editor of the Oil and Gas Law and Taxation Review, has an international reputation as a leading authority in shipping, insurance and energy law. This book is a collection of rules of international conventions, national laws and contractual arrangements on oil, gas and nuclear energy. My main focus is part three of the Book, which deals with natural gas. This part provides a brief overview of the formation of natural gas and deals with its attendant hazards and liability. The main focus of this aspect of the book however is the transportation of natural gas by ship and via pipelines, which is out of the purview of my proposed research. This chapter however, provides useful background information on natural gas as a source of energy.

Omorogbe, Yinka. *Oil and Gas Law in Nigeria* (Lagos, Nigeria: Malthouse Press Limited, 2000).

The author was the Dean of the Faculty of Law in the University of Ibadan, Nigeria. She is a leading authority and renowned author on Nigerian oil and gas laws. She is presently the Company Secretary/Head Corporate Services and Legal Department of the Nigerian National Petroleum Corporation (NNPC). This book provides a general introduction to many aspects of the Nigeria's oil and gas sector and related laws. It provides an overview of the history of oil and gas in Nigeria, the importance of oil to the Nigerian economy, legislation governing the sector, ownership of oil and gas, ownership theories in the oil and gas sectors, sovereignty over natural resources in international law; contracts for exploration and production, an overview of the natural gas industry, fiscal matters pertaining to the petroleum industry, downstream oil and gas law and policy, environmental issues, oil community issues and other topical issues in the petroleum industry. The fact that this book is written by a renowned academic and industry expert in Nigerian oil and gas laws, makes this book an indispensable tool for any student of Nigerian oil and gas law. However, like many oil and gas texts in Nigeria, the focus of the book is more on oil, than gas. This maybe a function of the fact that gas is often legislated alongside oil. This book would be useful for my thesis as it provides useful background on the Nigerian gas sector.

Pearce, W. David & Kerry R. Turner. *Economics of Natural Resources and the Environment* (Baltimore, Maryland: The John Hopkins University Press, 1990).

At the time of publication, David W. Pearce was a Professor of Economics and director of the Environmental Economics Center, University College, London and Kerry R. Turner was a senior lecturer at the School of Environmental Sciences, University of East Anglia, Norwich, England. This book seeks to integrate natural resource and environmental economics to provide a comprehensive economic picture of national and international environmental problems. I am particularly interested in chapter eleven, which deals with "Pollution Control in Mixed Economies." The aim of this is to find feasible pollution control policies. The authors posit that the appropriate set of policy instruments required to achieve environmental protection should be politically feasible, cost-effective and flexible among others. The authors identify some broad headings, which include direct control technology-based control, integrated pollution control and economic incentive pollution control. This chapter offers useful suggestions/recommendations that can be adopted for purposes of reform of laws that regulate environmental protection in Nigeria. Even though the models/ case studies are based on the United Kingdom and the United States, they can be contextually adapted for use in other countries.

Schrijver, Nico. *The Evolution of Sustainable Development Law: Inception, Meaning and Status* (Leiden, Boston: Martinus Nijhoff Publishers, 2008).

The author, a Professor of International Law, is the Academic Director of the Grotius Center for International Legal Studies, Leiden University. He also serves as a member of the United Nations Committee on Economic, Social and Cultural Rights among other things. This book is the integration of a collection of lectures delivered by the author at The Hague Academy of International Law. This book is a comprehensive treatise on the concept of sustainable development. It examines its early formation and evolution, its formal recognition at the Rio Convention and subsequent conventions up to the Johannesburg Convention of 2002. It reviews the adoption of the concept into various treaties and the various areas of its application, examines in detail the principles of sustainable development, its adoption and application by international tribunals, its reflection in national constitutions and concludes by highlighting challenges to the concept, its further evolution and implementation. This book reviews the concept of sustainable development in a critical manner, highlights criticisms of the concept, its adoption in international law and its implementation. The author highlights challenges that developing countries face vis-a-vis the practical application of the concept under the various international conventions. This book is concise, well researched and provides up to date information on the current position of the sustainable development concept. The review of this book would provide valuable information for my research, especially the chapter that deals with the concept of sustainable development.

The World Commission on Environment and Development, *Our Common Future* (Oxford & New York: Oxford University Press, 1987).

The World Commission on Environment and Development headed by Gro Harlem Brundtland, the then Prime Minister of Norway, was established by the United Nations. This Commission was established to examine environmental and development problems, develop a proposal to solve them to ensure that human progress will be sustained through development of resources and that future generations will be preserved. This book draws the attention of the world to the need for an integration of the environment and development. It follows the deliberations of the WECD and sets out their report. This book provides a pivotal reference point for the definition of sustainable development, as it is now used all over the world. This book is pivotal to research on the concept of sustainable development.

## SECONDARY MATERIAL: COLLECTION OF ESSAYS

Bugge, Hans Christian, “1987-2007: “Our Common Future” Revisited” in Hans Christian Bugge & Christina Voigt, eds., *Sustainable Development in International and National Law* (Groningen: Europa Law Publishing, 2008) 3.

The author, who is one of the editors of the book, is a professor of Environmental Law at the University of Oslo. Among other positions held in the Norwegian cabinet prior to this time, he was also the personal advisor to Gro Harlem Brundtland, the chair of the World Commission on Environment and Development (WCED). Based on his background, the author provides a very comprehensive overview of the WCED, its establishment, composition and its mandate from what may be described as an insider’s perspective. The author also provides an overview of the WCED’s report, highlighting what he believes to be the essence of the report, its objectives and the discussions that motivated the conclusions that were reached by the report. The author does a sector overview of the WCED’s application of the concept of sustainable development to different policy areas such as international economy, population, food, biodiversity, energy and industry among others. He concludes by drawing attention to the proposals made by the WCED for change at national and international level, which included the integration of environmental concerns into economic planning, international policies and law reform. This chapter provides an insightful and behind the scenes view of the work of the WCED. The author had the privilege of either sitting in on deliberations or having access to the discourse of these deliberations and as such this enables him to present a well-rounded and comprehensive picture of the rationale behind the WCED and its report. The presents an unbiased perspective by acknowledging the various criticisms leveled against the report. He points out that even the WCED acknowledged that its work was just a starting point. It offers very useful information on sustainable development. It provides foundational knowledge of the WCED. The review of this chapter would provide useful information for my proposed research, especially as it relates to the concept of sustainable development.

Cordonier Segger, Marie-Claire. “Sustainable Development in International Law” in Hans Christian Bugge & Christina Voigt, eds., *Sustainable Development in International and National Law* (Groningen: Europa Law Publishing, 2008) 87.

The author, is a Director of the Centre for International Sustainable Development Law, a member of the International Law Association’s Committee on International Law on Sustainable Development and directs international affairs at the Canadian Ministry of Natural Resources amongst others things. She points out the difficulty of a universal definition of sustainable development, which in turn makes it difficult to determine the scope of states commitments to the promotion of sustainable development in international treaties. In this chapter, the author

examines the concept of sustainable development from a development angle. She defines sustainable development as efforts to achieve progress on the condition that it should be possible to maintain it for the long term. The definitions of development vis-a-vis its role in sustainable development are also examined. The author traces the evolution of the principle of sustainable development from the United Nations Declaration on the Right to Development through to the Johannesburg Convention of 2002. She examines the concept of sustainable development from theoretical point of view, to determine its legal status in international law. She also considers the application of the concept of sustainable development in different international conventions. This chapter is a long one, but its length is justified as it provides a comprehensive overview of the concept of sustainable development, from its evolution, to its definition, status in international law, application and the identification of the seven principles posited by the International Law Association. This chapter is very rich and is a one-stop shop for a researcher on the concept of sustainable development. Its utility to my project is increased by the fact that it takes the development aspect into account and considers developing countries, albeit briefly.

Dias, Ayesha. "The Oil and Gas Industry in the Tangled Web of Environmental Regulation: Spider or Fly?" in Zhiguo Gao, ed. *Environmental Regulation of Oil and Gas* (London: Kluwer Law International, 1998) 59.

The author was an adviser in Environmental Law and Policy with the Division for Economic and Social Development and Natural Resources Management, United Nations, New York at the time of publication. Her work centered on advising and assisting developing countries to formulate programs for the environmental management of their natural resources. In this chapter, the author points out the pressure that the ever growing oil industry faces from growing awareness of environmental consequences of its activities, and the resultant demand for more stringent environmental protection standards. The author points out that there have been a plethora of regulatory provisions both at international and national levels to address this issue. This chapter highlights the provisions of some international conventions such as The United Nations Framework Convention on Climate Change, the 1992 Biological Diversity Convention, the United Nations Convention on Transboundary Movement of Hazardous Wastes and the Rio Declaration on Environment and Development that touch on the environment and development. This chapter also examines key concepts in international environmental law that relate to the oil and gas industry. She aptly captures the thrust of the arguments by pointing out that the primary concerns that need to be addressed are to meet the world demand for oil and gas in an environmentally responsible way while on the other hand ensuring an acceptable return on investments. The author does a good job of integrating the international, regional and national aspects of environmental regulation seamlessly. Her consideration of national environmental law covers both developing and developed countries. She is equally critical of both, and does not show a bias in favour of regimes in developed countries. This chapter is informative and useful in providing a general

overview on the sustainable development initiative. It is very useful to my proposed area of research as it centers on the economic development versus environmental challenge, especially as it relates to the oil and gas industry.

Fuentes, Ximena. “International Law Making in the Field of Sustainable Development: The Unequal Competition between Development and The Environment” in Nico Schrijver & Friedl Weiss, eds., *International Law and Sustainable Development* (Leiden, the Netherlands: Martinus Nijhoff Publishers, 2004) 7.

At the time of publication, the author was an Assistant Professor of International Law at the University Adolfo Ibanez, Chile and at the Universidad de Chile. In this chapter, the author notes the growing importance of the concept of sustainable development and the fact that its underlying rationale is an integration of environmental protection and economic development. The author examines its practical application in international conventions and asserts that the economic development aspect is being promoted over and above environmental protection. She examines the factors behind this unequal split and identifies one of them to be what she terms the “democratic deficit.” She contends that decisions at international level are not made democratically but vested in the hands of a few states that have development and business interests. The author seeks to proffer a solution to this inequality by proposing stronger mandatory rules for international environmental law. This chapter is a product of analytic reasoning and provides a different angle/perspective to sustainable development. It contains useful insights and contributions that will provide material for my proposed research, especially in the area of sustainable development.

Gao, Zhiguo. “Environmental Regulation of Oil and Gas in the Twentieth Century and Beyond: An Introduction and Overview” in Zhiguo Gao, ed. *Environmental Regulation of Oil and Gas* (London: Kluwer Law International, 1998) 3.

The author, doubles as the editor of the book. Dr. Gao is a renowned academic and lecturer of International/Environmental/Energy Law at the Centre for Petroleum and Mineral Law and Policy at the University of Dundee, Scotland. In providing an overview of the environmental regulation of petroleum activities, the author traces the history and evolution of environmental regulation of petroleum activities from case and tort law and the development of international environmental conventions. He then examines environmental regulation under international law, statutory and contractual regulations under some municipal laws such as the laws of the United States of America, the United Kingdom and Nigeria amongst others. He details his observations and findings on the gaps and lapses in international laws regulating the sector and these provide very useful recommendations and suggestions for reform, at international and national level. He concludes by pointing out that it may not be appropriate or sufficient to rely on a single system or approach. He advocates a two fold regulatory approach, such as an integrated comprehensive petroleum law and complementary

provisions in exploration contracts and licenses. While the article is informative and well written and brimming with reform ideas, the fact that it was published in 1998 means that it cannot be relied on to provide information on the present position of the law in all cases. It was for example published before the International Law Association adopted a Declaration on the Principles of International Law in the Field of Development at its April 2002 Conference in New Delhi, India and the World Summit on Sustainable Development held in Johannesburg, South Africa which have both made significant contributions to the concept of sustainable development. The focus of this article is in line with the central idea of my proposed research topic, as it identifies legislation that address the environmentally sustainable development of natural resources.

Giorgetta Sueli, “The Right to a Healthy Environment” in Nico Schrijver & Friedl Weiss, eds., *International Law and Sustainable Development* (Leiden, the Netherlands: Martinus Nijhoff Publishers, 2004) 379.

The author was a fellow in International Environmental Law, at the United Nations Institute for Training and Research, Geneva, Switzerland at the time of publication of this chapter. This chapter starts by setting out the linkage between the environment and economic development. The author points out that economic development that is well balanced with environmental protection ensures that human life is preserved. The need for protection of human life and the environment makes the right to the environment a major objective. The author examines this right from different perspectives including from a human rights angle, sustainable development angle and its application in international conventions. This chapter would provide useful material for the introductory aspects of my work, to introduce the environment before exploring the linkages between the environment and development.

Kaahwa, Wilbert T.K. “Towards Sustainable Development in the East African Community” in Nico Schrijver & Friedl Weiss, eds., *International Law and Sustainable Development* (Leiden, the Netherlands: Martinus Nijhoff Publishers, 2004) 631.

The author was the Counsel to the East African Community, Arusha, Tanzania at the time of publication of this chapter. This chapter examines the concept of sustainable development in the context of East African states, the majority of which are developing countries. The author examines the effectiveness and disadvantages of traditional international law mechanisms against a backdrop of poverty and low technological advancement. He provides a general critique of international environmental law as a means of achieving sustainable development, with his chief criticism being the lack of sanctions, redress and enforcement. He also examines the enforcement of international environmental law at national and regional levels as well as the role of state and regional governments in the

management of the environment and natural resources. The author concludes by pointing out the difficulty faced in making progress in sustainable development in developing countries. He identifies the main problem as limitations of the law and policy mechanisms at state level. He recommends that regional initiatives be explored to fill this gap. While this idea is a noble one, even as the author has rightly identified, many of the problems that plague the individual nation states will still surface at the regional initiatives. These include underdevelopment, technological advancement, good governance, accountability and threats to encroachment of national sovereignty. The author fails to explain how the issue of enforcement would be addressed. It appears these regional initiatives may also tow the line of international treaties “having no teeth.” This chapter deals with developing countries and will be very useful in providing recommendations for Nigeria’s sustainable development challenge, and would also challenge me to go further in finding a more workable solution.

Kiss, Alexandre. “Public Lectures on International Environmental Law” in Adrian J. Bradbrook, *et al* eds. *The Law of Energy for Sustainable Development* (New York: Cambridge University Press, 2005) 6.

The author was a professor of law at the University of Strasbourg, France and president of the European Council for Environmental Law at the time of publication. In this introductory chapter, the author examines the concepts of the environment, international and law, the relationship between these concepts and the utility of international environmental law. The author also discusses in some detail, the concept of sustainable development and its application in international environmental law. This chapter is very well written. The author’s analytical reasoning is excellent. This chapter was published in 2005, and while it is still relatively up to date, more recent sources should also be consulted. This chapter addresses one of the aspects of sustainable development that my thesis focuses on-sustainable development and the environment.

Kotvis, Jill A. “Environmental Issues in International Oil and Gas Exploration and Production” in Zhiguo Gao, ed., *Environmental Regulation of Oil and Gas* (London: Kluwer Law International, 1998) 249.

The author is the Chair of the Environmental Practice group at the Dallas based law firm of Hughes & Luce, LLP. Her practice includes international environmental law and environmental law issues involving the oil and gas industry. The author examines environmental regulation of the oil and gas industry in the United States of America and how the strict regulations have sometimes led them to focus their operations in less regulated regions such as developing countries. The author points out that even though the earlier focus of developing countries was economic rather than sustainable development, awareness occasioned by international environmental laws is beginning to change this. The author examines the possibility of the international community and

developing countries adapting United States style of environmental laws and standards. She identifies the factors that would make this extremely difficult or almost impossible. While this maybe a laudable objective, the author, nonetheless, identifies the one objection that easily comes to mind, the fact that developing countries have limited financial resources and seemingly unlimited problems such as population explosion, hunger, poverty and development issues. As such, they would have little or no interest in, or derive minimal benefits from the costly United States regulatory scheme and its plethora of laws and regulations. While this may appear to be a comparism of apples and oranges, this article captures the essence of a comparative analysis between two seemingly different regions with vastly different development positions, there is always a lesson to be learnt and a recommendation to be adopted. While a wholesale adoption would never work, a piece meal integration or adoption of some ideas for reform would suffice. This article addresses a central part of my research, which would involve comparism between Nigerian regulations and those of Alberta.

Omorogbe, Yinka. "Alternative Regulation and Government Reform in Resource Rich Developing Countries of Africa", in Barry Barton *et al*, eds. *Regulating Energy and Natural Resources* (Oxford: Oxford University Press, 2006) 39.

The author of this chapter was the dean of the faculty of law in the University of Ibadan, Nigeria for two terms. She is a renowned author on Nigerian oil and gas laws and is presently the Company Secretary/Head Corporate Services and Legal Department of the Nigerian National Petroleum Corporation (NNPC). In this chapter, Prof. Omorogbe moots the use of alternative regulation at national, municipal and international levels as a means of regulating energy and natural resources particularly as a tool for promoting transparency and good governance in resource rich developing countries. She defines “alternative regulation” as regulation emanating from parties other than authorities whose function is to make laws and regulations within the territory in question. She has identified these parties to include charitable, religious and Non Governmental Organizations She highlights the fact that parallel systems of regulation often exist in these developing societies such as regulation by religious bodies and traditional institutions. Prof. Omorogbe posits that this alternative regulation is aimed at reforming government processes and promoting transparency, accountability and good governance. Successful reform would in turn lead to the enactment and implementation of laws and regulations that strengthen and support the areas that have been reformed. The idea posited in this chapter, while not entirely novel, is very interesting. In the developing countries of Africa, religious, charitable and non-governmental organizations often provide a platform for the people to unite and oppose environmental degradation and underdevelopment. These pressure groups provide financial backing for lobbying and judicial action where the need arises and in recent times, have succeeded in getting recognition of, if not solutions for their demands from governments. The ideas mooted here would be considered in discussions on alternative means of regulation under my thesis.

Onuosa, Stanley Nwabuishi. "Sustainable Development of Petroleum Resources: the Rumpus and Resolution" in Zhiguo Gao, ed. *Environmental Regulation of Oil and Gas* (London: Kluwer Law International, 1998) 433.

The author at the time of publication was a Research Associate at the Centre for Petroleum and Mineral Law and Policy at the University of Dundee, Scotland. He examines the linkages between petroleum development and sustainable development. He traces the evolution and international recognition of the principle of sustainable development from the United Nations Conference on Environment and Development ("the Earth Summit"). The author examines the purpose of the principle, its implications on development of petroleum resources and different perceptions of the principle. He posits that "sustainable development" in its strict sense cannot apply to petroleum resources, as they are non-renewable. He advocates the use of quasi-sustainable development, backed by government initiative, political resolve and promotion of programmes to ensure its feasibility. The author addresses not only theoretical, but practical means of developing petroleum resources sustainably. One of such means is the development of other sectors of the economy and shifting the focus and total income stream from petroleum. This recommendation is of utmost importance to resource-based developing countries, which are almost 100 percent dependent on oil revenue. The high premium on revenue generation in turn leads to low premium on environmental protection and other sustainable development initiatives. He also specifically identifies elements of sustainable development as they relate to petroleum resources. These elements have helped me to narrow my focus to conservation of supply and environmental protection as they relate to natural gas.

Sengupta, Arjun. "Implementing the Right to Development" in Nico Schrijver & Friedl Weiss, eds., *International Law and Sustainable Development* (Leiden, the Netherlands: Martinus Nijhoff Publishers, 2004) 341.

The author at the time of publication was the Chairman, Center for Human Rights and Development, New Delhi, India. He was also a former United Nations Independent Expert on the Right to Development. This chapter focuses on the right to development, which has its origins in the United Nations Declaration of the Right to Development of 1986. It examines the concept, its content and definitions. This chapter deals specifically with the implementation of this right and in doing so, examines national and international actions that would ensure implementation. This chapter provides an overview of development from different perspectives. The author in this chapter tows a line, different from other chapters in the book, by sticking solely to the development aspect without making any concessions to the environment. This position can be attributed to his background in international development law. This chapter will be useful in providing an

overview on not just the apparent need for, but also the right to development in the introductory aspects of my work.

Walde, Thomas W. “Natural Resources and Sustainable Development: From Good Intentions to Good Consequences” in Nico Schrijver & Friedl Weiss, eds., *International Law and Sustainable Development* (Leiden, the Netherlands: Martinus Nijhoff Publishers, 2004) 119.

The author, now deceased was at the time of publication a renowned scholar, Professor of International Economic, Natural Resources and Energy Law and the Jean-Monnet Chair, Centre for Petroleum and Mineral Law and Policy, Dundee, Scotland. In this chapter, the author in this chapter examines the relevance of the concept of sustainable development especially as it relates to non-renewable natural resources, with a focus on its relevance to developing countries. The author identifies what he terms some basic truths about non-renewable natural resources and examines the meaning of the concept of sustainable development to mineral resources. He contends that the challenge of sustainability, as far as non-renewable resources are concerned does not lie in limiting or restricting the quantities that are extracted, but that the true test of sustainability, lies in the conversion of the resource extracted and withdrawn from the “underground account” of the nation, into an equivalent or higher unit of social and economic capital. He also examines the policy implications of sustainable development on natural resources. The tone of this work is critical. It appears the author is out to dispel what maybe unrealistic notions of sustainable development. He does not concern himself with a history and overview of the concept per se. He describes the glowing commendations that have been credited to sustainable development, and further in the chapter, states his intention to bring lofty discussions of international environmental lawyers to the ground as far as the concept is concerned. He provides a practical perspective, and reasons why this widely acclaimed principle might not work in real life situations. He points out that legal rules do not exist for discourse within closed circles but must be considered in terms of their social, political and institutional context as well as their past, present and future and how they operate in reality. The focus on non-renewable resources such as oil and gas, especially in developing countries, makes this chapter key to the focus of my thesis.

Winter, Gerd. “A Fundamental and Two Pillars: The Concept of Sustainable Development 20 Years after the Bruntland Report” in Hans Christian Bugge & Christina Voigt, eds., *Sustainable development in International and National Law* (Groningen: Europa Law Publishing, 2008) 25.

The author is a Professor of Public Law and Sociology of Law at the University of Bremen and director of the Research Center for European Environmental Law. His research areas include comparative, European and International

Environmental law. In this chapter, the author examines the direction the concept of sustainable development has taken in the years since its formal formulation by the WCED. He points out that three pillars of sustainable development namely economic development, social development and environmental protection have emerged, been recognized and propagated by international conventions and national declarations. He agrees that the emergence of these concepts have challenged laws and sectoral policies to take environmental policies into account, but contends that these three concepts are not as equal as they are made out to be. Rather, the concept of sustainable development means that socio-economic development is sustained by the environment, hence placing more emphasis on the environment. This is the basis of his assertion that there are two pillars and a foundation. Beyond the intellectual theoretical reasoning however, the author contends that for sustainable development to carry more weight as a rule, its scope and content should be defined. The author demonstrates analytic reasoning in this chapter. He goes beyond the examination of available literature and conventions, to provide a new perspective on the sustainable development concept. This would provide useful material for review of literature on the concept of sustainable development. It will also provide recommendations/ideas for reform of Nigeria's laws.

Worika, Ibibia, Lucky. "Environmental Concepts and Terms in Petroleum Legislation and Contracts: A Preliminary Study" in Zhiguo Gao, ed. *Environmental Regulation of Oil and Gas* (London: Kluwer Law International, 1998) 393.

The author at the time of publication of this chapter in 1998 was a Commonwealth Academic Staff Scholar undertaking PhD research in International Environmental and Petroleum Law at the Centre for Energy, Petroleum and Mineral Law and Policy, Dundee, Scotland. Dr. Workia is currently the Senior Legal Counsel to the Organization of Petroleum Exporting Countries (OPEC). In this chapter, the author examines some environmental concepts and terms that are used in petroleum laws, regulations and contracts. These terms include "Good Oilfield Practice," "Good Production Practice" and "Diligent and Prudent Operations" among others. He points out that the challenge lays in the fact that even though the assumption is that their definition, content and practical effect are widely known, their application and validity have rarely been challenged. This is important because these concepts and terms are often included to provide some standards for environmental protection or accountability. More specifically, the fact that the environmental obligations imposed by these terms are vague and uncertain, provide ample opportunity for arbitrariness and subjectivism in their implementation. The author examines the advantages and disadvantages of retaining these concepts and concludes by suggesting the twin concepts of "Best Practicable Environmental Option" and Sustainable Petroleum Development Practice" be adopted to support and compliment the existing terms. This chapter identifies an aspect that is crucial to the reform of environmental laws in developing countries. Section 7 of the

Nigerian Mineral Oil Safety Regulations for example, provides *interalia* that where specific regulations for drilling and production operations are not made, such operations shall conform to “good oil field practice.” It adopts American and British standards as a means of determining what this term would amount to. This lends sufficient credibility to the author’s assertions. This chapter is well researched and addresses a seemingly small but very important aspect for reform of Nigerian laws, which is one of the objectives of my proposed research. It contains recommendations that will be useful or the reform of the present body of laws in Nigeria.

- \_\_\_\_. “Energy Development and Utilization in Africa” in Adrian J. Bradbrook, *et al* eds. *The Law of Energy for Sustainable Development* (New York: Cambridge University Press, 2005) 324.

The author was at the time of publication of this article a Senior Lecturer, Faculty of Law, Rivers State University of Science and Technology and the Senior Counsel to OPEC, a position, which he still holds. The author examines the link between energy and sustainable development and he identifies the lack of clean and reasonably priced energy as one of the obstacles to sustainable development in Africa. He also identifies the detrimental effect of petroleum extraction and production as an impediment to long-term sustainability of the resources. This chapter adopts Ghana and Nigeria both in West Africa as case studies and examines their national energy legislations for linkages to sustainable development. The author points out that all the opportunities inherent in Africa’s energy sector cannot be harnessed without more specific and adequate legal and regulatory framework, supported and implemented by effective institutional mechanisms. Even though the author addresses several forms of energy, the chapter considers oil and gas and their regulation in Nigeria in some detail. His review, however, is limited to the laws that regulate utilization of gas by way of re-injection. Notwithstanding, the article is very useful in providing a detailed overview of the Nigerian gas sector and suggestions for reform.

## SECONDARY MATERIALS: CONFERENCE PAPERS AND ARTICLES

- Adeniji, ‘Gbite. “The Legal Framework for Natural Gas Utilization In Nigeria” (paper presented at the International Bar Association Conference Abuja, Nigeria, 27-28 November 2000)[unpublished].

Adegbite Adeniji is a renowned solicitor in Nigerian energy and natural resources law. He was a Senior Consultant to the World Bank (Oil, Gas, Chemicals & Mining Department) in Washington, DC. Mr. Adeniji acts, as a consultant to the Nigerian government. He was a key member of the team that drafted the National Gas Policy document, The National Gas Supply and Pricing Policy and the

National Domestic Gas Supply and Pricing Regulations. Mr. Adeniji is currently one of the partners of one of Nigeria's top law firms, Aelex. This paper provides an overview of the utilization of natural gas in Nigeria. It reviews the ownership of natural gas, the contractual arrangements, the regulation of production, price, transmission and the fiscal aspects of natural gas in Nigeria. The focus of this paper is the utilization of gas for electricity projects, but it touches on several areas of gas regulation in Nigeria that are useful for my proposed research. It highlights utilization of gas by way or re-injection and the environmental regulation of gas production. This article provides a useful overview of the state of the Nigerian gas sector. It is however dated, as it was written in 2000. In the light of this, other sources need to be consulted for more recent information.

Adeniji Adegbite & Sipasi Sina, "The International Comparative Legal Guide to Gas Regulations: Nigeria" (2009) ICLG, 178. Online: <<http://www.iclg.co.uk/khadmin/Publications/pdf/2500.pdf>>.

Adegbite Adeniji is a renowned solicitor in Nigerian energy and natural resources law. He was a Senior Consultant to the World Bank (Oil, Gas, Chemicals & Mining Department) in Washington, DC. Mr. Adeniji acts as a consultant to the Nigerian government. He was a key member of the team that drafted the National Gas Policy document, The National Gas Supply and Pricing Policy and the National Domestic Gas Supply and Pricing Regulations. Mr. Adeniji is currently one of the partners of one of Nigeria's top law firms, Aelex. Sina Sipasi is a senior associate in the energy and natural resources practice of Aelex. This publication is commissioned by the Global Legal Group on an annual basis and provides in different sections, an overview of Nigeria's natural gas sector, the development of the natural gas industry, the legislation and regulations governing contractual and environmental aspects of the natural gas sector amongst others. It provides short summaries of different aspects of Nigeria's natural gas sector. Even though this overview is more transactional or business directed, it is very useful to both Nigerians and non-Nigerians from a regulatory or commercial perspective.

Akinjide, Richard *et al*, "Current Legal Issues for Gas Production and Utilization in Nigeria" Akinjideandco.com, online: <[http://www.akinjideandco.com/gas\\_production.html](http://www.akinjideandco.com/gas_production.html)>.

This is a publication of Akinjide & Co, one of Nigeria's top law firms. This paper identifies the challenge of harnessing Nigeria's gas resources as one of the greatest problems facing Nigeria's petroleum industry. This paper examines the issues that make it impossible to harness this resource and seeks to proffer solutions. The need for utilization of natural gas in Nigeria, the factors that militate against natural gas utilization and the measures taken to arrest this trend

are also examined. The solutions include more fiscal incentives, the establishment of a gas regulator and a promulgation of a Gas Code amongst others. This paper is written from a commercial perspective and does not provide much information in terms of environmental regulation of gas production. It however provides a practical perspective and identifies live issues. Its recommendations, coming from an industry perspective are also very useful. This material will provide useful information on the Nigerian gas sector in my thesis.

Akinrele, Adedolapo. "Gas Flaring: Is There An End in Sight?" (Publication of F.O. Akinrele & Co, 2001) foakinrele.com, online: <<http://www.foakinrele.com/pdfs/oil&gas/gasflaring.pdf>>.

This paper is a publication of the law firm of F.O. Akinrele & Co, one of Nigeria's top law firms. The principle partner of the firm, Adedolapo Akinrele is a renowned oil and gas expert in Nigeria and the author of a very popular Nigerian oil and gas law text. This article provides an overview of gas flaring in Nigeria and its effect on the Nigerian economy and environment. It points out the efforts that successive Nigerian governments have made to find a solution to, and put an end to gas flaring. These efforts involved the adoption of a two-pronged approach, namely: the payment of a penalty for flaring by exploration and production companies and fiscal incentives to encourage these companies to stop flaring gas. This paper notes that in spite of these measures, Nigeria is yet to witness a marked reduction in the quantity of gas being flared. This paper identifies the barriers to effective utilization to include the lack of a ready market, cost, technology and facilities required to harness the associated gas. The paper identifies short-term measures taken by exploration and production companies and the long term plans to Nigerian government is making to find a solution. This article though brief, is very informative. It provides a practical, industry perspective to the issue of gas flaring. This article was however published in 2001, and since then, there have been developments in the gas flaring initiative. The most recent development is the draft Gas Flaring (Prohibition and Punishment) Bill of 2009. The objective of this Bill includes putting an end to environmental hazards posed by gas flaring, reducing health hazards and minimizing economic waste. This paper would provide a very useful source of information for my thesis in considering Nigeria's gas industry.

Emeseh, Enogbo. "Limitations of Law in Promoting Synergy between Environment and Development Policies in Developing Countries: A Case Study of the Petroleum Industry in Nigeria" (2006) 24 J. Energy, Nat'l Res. & Env'tl. L. 574.

The author is a lecturer at the University of Wales, Aberystwyth. Her area of speciality is environmental law and policy. She teaches International Environmental Law and Law of Environmental Protection amongst others. In this

paper published in 2006, the author notes the increasing use of law to integrate environmental protection into development projects to address the conflicts between the two sectors. She also notes that the existence of multiple laws have not provided a lasting solution to the problem of environmental protection. The author, in determining the reasons why this challenge still exists, considers policies and enforcement of laws. In doing this, she examines the use of law as a tool of policy integration, by tracing the evolution of the integration of development and the environment from the Stockholm Conference of 1972 to the Rio Conference. She also examines its integration into national policy and decision-making processes. The author identifies the enforcement of laws as the main challenge to environmental protection developing countries. To buttress this point, she considers the regulation and enforcement of environmental damage occasioned by the activities of the oil sector in Nigeria as a case study. The case study provides an overview of the Nigerian oil industry to highlight the conflicts between the environment and development. It also undertakes an analysis of the existing regulatory framework and seeks to determine the challenges to formal enforcement of regulations. The author's recommendations include the establishment of viable supporting structures and finding a balance between investments and environmental protection laws. This article is detailed, well researched and very well written. It is analytical and provides new insights and practical recommendations for reform. Like many others, its focus is mainly on oil. However, there are lessons to be learnt for the gas sector especially in the areas where gas is jointly regulated with oil. This paper would provide very useful information for my thesis, especially in highlighting the effects of oil and gas activities on the environment and the enforcement challenge.

Kalu, Victoria E. & Ngozi F. Stewart. "Nigeria's Niger Delta Crises and Resolution of Oil and Gas Related Disputes: Need for a Paradigm Shift" (2007) 24 J. Energy, Nat'l Res. & Envtl. L. 244.

Victoria E. Kalu was a lecturer in the Department of Private and Property Law, in the faculty of law of the University of Benin, Nigeria and a doctoral student at the University of Nigeria, Nsukka at the time of publication of this article. Ngozi F. Stewart was a lecturer in the Department of Public Law of the Faculty of Law, University of Benin, This paper published in 2007, examines the inability of conventional means of resolving energy disputes, to address the raging conflict in Nigeria's Niger Delta. This paper proposes the use of both proactive and reactive methods to resolve the crisis. This paper provides very useful, practical and viable suggestions and recommendations for the resolution of the conflict. It is however noteworthy that in attempting to bring the conflict to an end, the Nigerian government has taken a shortcut by negotiating a cease fire and offering amnesty and financial compensation to the warring inhabitants without addressing the underlying fundamental issues or adopting a long lasting solution. Even though the focus of this paper is dispute resolution, it identifies the sources of the conflict in Nigeria's Niger Delta, to include environmental degradation. Some of its recommendations and suggestions would be very useful in my thesis, especially in

describing the state of the environment in the Niger Delta occasioned by oil and gas exploration and production activities.

Mushkat, Roda. "Environmental Sustainability: A Perspective from the Asia-Pacific Region" (1993) 27 U.B.C.L.Rev. 153.

The author was a reader in the University of Hong Kong at the time of publication. She taught courses in International Law and Jurisprudence and is the author of several publications in the areas of International law, Public law and Philosophy of Law. Dr. Mushkat is currently a professor at the University of Brunel Law School, where she chairs the Research Ethics Committee and is the director of the Centre for International and Public Law. This article, published in 1993, looks at the concept of sustainable development and the contradictions surrounding it from the perspective of the Asia-Pacific region. It provides a detailed and insightful analysis of the development versus environment debate, especially from the perspective of developing countries. This article does not focus on natural resources but makes a case for development and environment in developing countries in general. This article is dated as it was published in 1993. As such, it will have to be read in conjunction with more recent articles or texts in this area. Notwithstanding its generality and date, this provides a good starting point for research in the area of sustainable development. It is relevant to my thesis as it addresses sustainable development and its application in international laws from the perspective of developing countries.

Oyebode, Gbenga & Kofo Dosekun. "The International Comparative Legal Guide to Gas Regulations: Nigeria", (2008) ICLG 152 at 153. Online: <<http://www.iclg.co.uk/khadmin/Publications/pdf/1799.pdf>>.

The authors Gbenga Oyebode and Kofo Dosekun are foremost legal practitioners, the managing and senior partners, respectively, of one of Nigeria's leading law firms, Aluko & Oyebode. They are industry experts in energy and natural resources law. This publication commissioned by the Global Legal Group provides, an overview of Nigeria's natural gas sector, the development of the natural gas industry, the legislation and regulations governing contractual and environmental aspects of the natural gas sector amongst others. This paper cuts across a wide range of topics and provides short but detailed summaries of different aspects of Nigeria's natural gas sector. While it is not specifically intended to be an academic piece, it is very useful to both Nigerians and non-Nigerians from a scholarly, regulatory or commercial perspective.

Ukoli, M.K. “Environmental Factors in the Management of the Oil and Gas Industry in Nigeria” Cenbank.org, online: <<http://www.cenbank.org/out/annual/ACZR/2001/Owe-01-2.pdf>>.

This paper focuses on the development of effective and efficient implementation of measures to mitigate environmental problems associated with the Nigerian oil and gas industry. This paper presents a detailed overview of the exploration and production operations in the oil and gas industry, highlighting the environmental impact of these operations. It identifies legal and policy instruments that have been put in place by the government to deal with these, and their limitations. This paper specifically identifies one of the major challenges to be non-implementation and enforcement of legal instruments promulgated for the protection of the environment. The author concludes by proffering recommendations, which include the harmonization in the regulation of oil and gas pollution by streamlining the operations of regulatory agencies, participation by the inhabitants of the oil producing regions and strict implementation of government policies. This paper focuses more on oil, than gas, and contains technical descriptions. The paper however provides practical and viable suggestions for reform, which would be very useful for the purposes of my thesis.

Wenig, M. Michael and Michal C. Moore, “Searching for Meaning in Energy Resource Conservation” (2007) 99 Resources (Newsletter of the Canadian Institute of Resources Law), online: <<http://dspace.ucalgary.ca/bitstream/1880/47039/1/Resources99.pdf>>.

Michael M. Wenig was at the time of publication of this article, a Research Associate at the Canadian Institute of Resources Law and Adjunct Professor, at the University of Calgary’s Faculty of Law. Michal C. Moore was a Senior Fellow at the Institute for Sustainable Energy, Environment and Economy, of the University of Calgary. This article assesses the legislative objective of the Energy Resources Conservation Act (ERCA), which contains one of Alberta’s prominent energy policies. The legislative objective of this Act is stated as effecting conservation and preventing waste of Alberta’s energy resources. This article explores the meaning and utility of the Act’s energy resource “conservation” purpose in the context of non-renewable energy resources, particularly oil and gas. The article also considers the history of and scholarship on oil and gas conservation programs. It also considers the utility of proposed legislative/policy reforms to the energy resource “conservation” mandate. This article adopts a critical approach to this legislation and its intent. The key criticism is that the Act does not define conservation. The authors contend that a meaning can only be ascribed to conservation by looking at the Act’s other purposes and other conservation legislation. This article is very useful to my thesis which defines “sustainable development” narrowly defined as consisting of environmental protection and conservation of supply. My thesis also draws lessons from Alberta’s conservation regime. This article provides excellent insight on the law in operation as opposed to law in the law books from a comparative perspective.

## SECONDARY MATERIALS: DISSERTATIONS AND THESIS

Goudina, E. Ekaterina. *A Sustainable Development Critique of the Russian Oil and Gas Disposition System: Learning From Canadian Experience with Intergenerational Equity* (LL.M Thesis, Faculty of Law, University of Calgary, 2004) [unpublished].

This is a thesis written in 2004 by a former graduate student of the faculty of Law, University of Calgary. Ms. Goudina now practices law with the Russian firm of Goltsblat BLP. This thesis examines the importance of the concept of sustainable development to the reform of Russian oil and gas laws. It focuses on one of the principles of sustainable development, the principle of intragenerational equity and uses it as criteria to assess the sustainability of Russia's oil and gas laws. This thesis also adopts a comparative approach using the legal regime regulating mineral development in Alberta. Alberta's regime is examined for consistency with the identified principle, and lessons are drawn for Russia from the positive aspects of Alberta's compliance. This thesis is very well written, concise and examines the subject matter in great detail. The central idea in this thesis closely resembles that of my thesis, that is sustainable development and non-renewable resources. This thesis would be most useful for my proposed work, in providing ideas on how to arrive at criteria for evaluating sustainability and to provide a general guide.

Iyalomhe, David Osigbemhe. *Environmental Regulation of the Oil and Gas Industry in Nigeria: Lessons from Alberta's Experience* (LL.M Thesis, Faculty of Graduate Studies and Research, University of Alberta, 1998) [unpublished].

The author was a graduate student of the Faculty of Law at the University of Alberta when this thesis was written. He practices law in California, United States of America. This thesis written in 1998 identifies and examines the major issues in the environmental regulation of Nigeria's oil and gas resources. It examines the legislative and regulatory approaches adopted by the Nigerian government and undertakes a comparative analysis to draw lessons and recommendations from Alberta's experience. I find the author's discussion on the indigenous constraints facing developing countries with respect to environmental regulation particularly useful. While the thesis does not approach environmental regulation from a sustainable development angle, it is very well written and provides a useful guide and source of information for several aspects of my thesis. This thesis was written in 1998, and this ought to be taken into account in reviewing its contents, particularly with respect to currency of legislation.

Polyakevich, G. Victoria. Sustainable Development and Evolution of Production Sharing Agreements: Multi Stakeholder Perspective (LL.M Thesis, Faculty of Law, University of Calgary, 2009) [unpublished].

This is a thesis written by a former graduate student of the faculty of Law, University of Calgary. This thesis written is very recent as it was completed in March 2009. This thesis, examines the principle of sustainable development with respect to petroleum arrangements, particularly the Production Sharing Contract (PSA). It examines this from a multi-stakeholder perspective, namely that of the host governments, the Multinational oil companies and the citizens of the country or the people resident at the point of extraction. This thesis examines how the concept of sustainable development can be used to improve on PSA's to ensure that the resulting arrangements accommodate the interests of all parties. It seeks to identify criteria for evaluating sustainability, but unlike Ms. Goudina's use of the principle of intragenerational equity in her thesis, the criteria for evaluation are not easily and readily ascertainable. This thesis is however very well written and researched. The author's analytical reasoning is superb and her review of the concept of sustainable development provides a different and interesting perspective. The central idea in this thesis closely resembles that of my thesis, that is sustainable development and non-renewable resources. Even though this thesis focuses on the contractual arrangements for oil, this thesis would be most useful for my thesis, in providing ideas on how to arrive at criteria for evaluating sustainability and to provide a general guide.

Odumosu, Ibrinke Tinuola. Reforming Gas Flaring Laws in Nigeria: the Transferability of the Alberta Framework (LL.M Thesis, Faculty of Law, University of Calgary, 2005)[unpublished].

This is a thesis written by a former graduate student of the faculty of Law, University of Calgary. Ms. Odumosu is now an associate professor of law at the faculty of law of the University of Saskatchewan. This thesis written in 2005 examines the issue of gas flaring in Nigeria, its negative impact on the environment and lifestyle of the inhabitants of affected areas. It also examines the reasons why gas is still being flared in Nigeria, and the regulatory efforts made by the Nigerian government to put an end to gas flaring. The thesis adopts a comparative approach in reviewing the history and development of gas in both Alberta and Nigeria, their regulatory frameworks and examines the viability of transferring the Alberta regulatory framework for gas flaring reduction to Nigeria and makes recommendations for developing an effective gas flaring reduction regulatory regime, which will be suitable for Nigeria. It considers the theories of transplant, and its central ideas and use of comparative methodology are similar to those that will be adopted by my thesis. Ms. Odumosu's use of comparative methodology is excellent. The thesis is well written and well researched. Its review will provide guidance and useful ideas for my thesis.

## SECONDARY MATERIALS: NEWSPAPER ARTICLES

Nigeria Loses \$1.46 billion To Gas Flaring Annually. People's Daily Online:  
<<http://english.people.com.cn/90001/90778/90858/90866/6612021.html>>.

Adeyemi, Babalola & Okere Roseline. "Increased Import-dependence, De-industrialization diminish Nigeria's celebration at 40". Guardian News Online:  
<[http://www.ngrguardiannews.com/industry/article01//indexn2\\_html?pdate=300909&ptitle=Increased%20importdependence,%20deindustrialisation%20diminish%20Nigeria's%20celebration%20at%2049](http://www.ngrguardiannews.com/industry/article01//indexn2_html?pdate=300909&ptitle=Increased%20importdependence,%20deindustrialisation%20diminish%20Nigeria's%20celebration%20at%2049)>.

Dike, Uche. "Nuclear Energy: An Alternative to PHCN's Epileptic Supply", Business Day Online: [http://www.businessdayonline.com/index.php?option=com\\_content&view=article&id=5721:nuclear-energy-an-alternative-to-phcns-epileptic-supply&catid=67:oil&Itemid=307](http://www.businessdayonline.com/index.php?option=com_content&view=article&id=5721:nuclear-energy-an-alternative-to-phcns-epileptic-supply&catid=67:oil&Itemid=307).

Iriekpen Davidson. "Nigeria: Power Outage: The Monster that won't Go Away". Online:<<http://allafrica.com/stories/200906240433.html?page=2>>.

Owonibi, Ayomide. "Is 6,000 Megawatts Enough to solve Nigeria's Electricity Crisis?" Tribune online: <<http://www.tribune.com.ng/28092009/tue/eog1.html>>.

Owoseye, Ayodamola. "Coca-cola Closes the Last Concentrate Factory in Nigeria". Online: <<http://www.nairaland.com/nigeria/topic-326697.0.html>>.

## OTHER MATERIALS

Department of Petroleum Resources, [dprnigeria.com](http://www.dprnigeria.com), online:  
<<http://www.dprnigeria.com>>.

The Department of Petroleum Resources (DPR) is Nigeria's oil and gas regulator. The DPR's website provides up to date information on oil and gas regulated issues. The DPR is also the publisher of regulations for the gas sector. Under its new management, the website contains more current and useful information, even though it is still difficult and in most cases impossible to obtain a list of all the published regulations and copies of the regulations from the DPR's website.

Energy Information Association Statistics on Nigerian Oil  
<<http://www.eia.doe.gov/emeu/cabs/Nigeria/Oil.html>>.

This is the website of the Energy Information Agency of the United States Department of Energy. It publishes statistics and information on energy and natural resources for most countries including Nigeria. It provides statistics and background information on Nigeria's oil sector.

Energy Information Association Statistics on Nigerian Natural Gas  
<<http://www.eia.doe.gov/emeu/cabs/Nigeria/NaturalGas.html>>.

This is the website of the Energy Information Agency of the United States Department of Energy. It publishes statistics and information on energy and natural resources for most countries including Nigeria. It provides statistics and background information on Nigeria's natural gas sector.

Energy Information Association Statistics on Nigeria  
<<http://www.eia.doe.gov/emeu/cabs/Nigeria/Background.html>>.

This is the website of the Energy Information Agency of the United States Department of Energy. It publishes statistics and information on energy and natural resources for most countries including Nigeria. It provides statistics and background information on Nigeria.

Nigerian Liquefied Natural Gas ("NLNG") Website, online:  
<<http://www.nlng.com/NLNGnew/environment/NLNG+and+Gas+Reserves.htm>>

This is the website of the NLNG. Nigeria LNG Limited is jointly owned by Nigerian National Petroleum Corporation, Shell, Total LNG Nigeria Ltd, and ENI. It was incorporated as a limited liability company on May 17, 1989, to harness Nigeria's vast natural gas resources and produce Liquefied Natural Gas (LNG) and Natural Gas Liquids (NGLs) for export. This website contains statistics and other useful information that relates to the Nigerian gas industry.

Natural Gas Basics. Online:  
<[http://tonto.eia.doe.gov/kids/energy.cfm?page=natural\\_gas\\_home-basics](http://tonto.eia.doe.gov/kids/energy.cfm?page=natural_gas_home-basics)>.

This is a section of the website of the Energy Information Agency of the United States Department of Energy. It provides basic and foundational information on various aspects of natural gas such as its composition, formation, means of exploration, production, storage and environmental aspects for beginners. It is very detailed, basic and easy to understand. This website provides useful background information on the physical/geological aspects of natural gas.

# **Combating Climate Change Through Emissions Trading: A Study Of How Can Canada Achieve Effective Linkage With the European Union?**

## **Annotated Bibliography**

Compiled by Rolandas Vaiciulis

The following is an annotated bibliography for my thesis as a thesis-based LL.M. candidate at the University of Calgary.

The question I address in my thesis is the following:

How can the proposed Canadian federal emissions trading system achieve effective linkage with the EU ETS?

## **I. PRIMARY SOURCES**

### **1. International**

United Nation Framework Convention on Climate Change, 9May 1992, 1771 U.N.T.S. 107

(entered into force 21 March 1994), online: UNFCCC Homepage

<<http://unfccc.int/resource/docs/convkp/conveng.pdf> > [hereinafter UNFCCC].

Kyoto Protocol to the Framework Convention on Climate Change, Dec. 11, 1997, 37 I.L.M. 22 (entered into force 16 February 2005), online: UNFCCC Homepage <<http://unfccc.int/resource/docs/convkp/kpeng.pdf>> [hereinafter Kyoto Protocol].

## **2. European**

Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, online: Environment Directorate-General of the European Commission <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2003L0087:20090625:EN:PDF>>.

## **3. Canadian**

Canada, Turning the Corner: Taking Action to Fight Climate Change (Ottawa: Government of Canada, 2008), online: Government of Canada, Climate Change <<http://www.ec.gc.ca/cc/default.asp?lang=En&n=A3CB096D-1>>.

## II. SECONDARY SOURCES

### 1. Books

**Faure, Michael and Teeters, Marjan** *Climate Change and European Emissions Trading: Lessons for Theory and Practice* (Cheltenham, UK: Edward Elgar Publishing Limited, 2008).

The authors are law professors at the University of Rotterdam and the University of Maastricht in Netherlands. This book contains several articles that assess the experiences of the EU emissions trading scheme thus far and also suggest future development from both theoretical and practical perspectives. It offers valuable insights into EU emissions trading system to academics and policy makers both in the public and private sectors. Those insights are not only relevant for understanding the past, but moreover, for guiding the future design of emissions trading for greenhouse gases.

### 2. Academic articles

**Bankes, Nigel D. and Lucas, Alastair R.** “Kyoto, Constitutional Law and Alberta’s Proposals” (2004-2005) 42 *Alta. L. Rev.* 355.

Both authors are law professors of the Law Faculty at the University of Calgary. This article focuses on a constitutional analysis of Alberta’s proposed emissions trading legislation and its potential incompatibility with the proposed federal emissions trading scheme. This article provides an overview of the harmonization and constitutional issues Canadian federal

government might face in implementing its emissions trading system in its provinces, a situation where some provinces had enacted less onerous emissions trading schemes than what the Canadian federal government has contemplated. Despite the fact that this article was written five years ago, the harmonization and constitutionality is still an issue.

**Boyle, Grant. “A Review of Emerging GHG Emissions Trading in North America: Fragmentation or Progress” (2009) 46 Alberta Law Review 173.**

The author is a LLB candidate at the Osgoode Hall Law School. Prior to studying law, he worked as an energy and environmental policy researcher at the United Nations University in Tokyo. In this article, he reviews the North American emissions trading schemes, including the Canadian, detailing their key features and drawing comparisons between them. This article is helpful because it helps the readers to understand the current federal emissions trading model in Canada as well as the trend of international emissions trading.

**Duff, David. “Combating Climate Change Through Emissions Trading and Taxation” (2007) Nexus 39.**

David Duff is a law professor at the University of Toronto. This article examines the emissions trading and environmental taxation. This article is useful in understanding why emissions trading is a more effective and a more efficient tool to reduce GHG emissions than other voluntary initiatives, subsidies or direct regulations.

**Goetz, John C. et al. “Development of Carbon Emissions Trading in Canada” (2009) 46 Alberta Law Review 377.**

The authors are three lawyers and an acting director of the Policy Development and Offsets Solution Team from Alberta and Ontario. First, this article provides an overview of the international reaction to climate change. Second, it explores carbon emissions trading in Canada, the European Union and the United States. Third, it offers suggestions for the future developments of emissions trading in Canada and internationally. This article helps me to understand the design of the federal Canadian emissions trading system.

**Jaccard, Mark; Rivers, Nick and Peters, Jotham. “Destined for failure? Assessing Canada’s Current Climate Policy” (2009) 24 Inroads 55.**

Mark Jaccard is a professor in the School of Resource and Environmental Management at the Simon Fraser University in Burnaby, B.C., where Nic Rivers is a PhD candidate and Jotham Peters is a research associate. This article provides an assessment of the main elements of the federal government’s current climate change policy. It concludes that the new federal government’s plan to reduce carbon emissions is unlikely to meet its targets. This article is helpful for my research because it provides an overview of the factors that prevent the federal government from reaching its targets under the new updated emissions trading legislation.

**King, Michael R. “An Overview of Carbon Markets and Emissions Trading: Lessons for Canada”, online: Bank of Canada <<http://www.bankofcanada.ca>>.**

At the time of writing the author was the assistant chief in the International Department of the Bank of Canada. The author provides an overview of carbon markets and explains how emissions trading can be important in encouraging the reduction of CO<sub>2</sub> emissions in an efficient manner. He describes the key steps in establishing a cap-and-trade system, and reviews the

European experiences with emissions trading. He highlights the lessons learned from the EU Emissions Trading System on how to design a market that operates efficiently and effectively.

**King, Michael R. “No Carbon Copy: While Canada and the US Dithered, the European Union Built a Carbon-Emissions Trading Mechanism”, (2008) 34 Alternatives Journal 10.**

At the time of writing, the author was the assistant chief in the International Department of the Bank of Canada. This article compares the EU-ETS and the current proposed federal Canadian emissions trading system by assessing them against a set of criteria that includes emission reduction targets, allocation, data collection, registration and emissions verification, diversity of players and timing, compliance and enforcement. It helps me to understand how the proposed Canadian scheme is similar and how it deviates from the EU ETS.

### **3. Reports**

**Bromley, Matthew and Demerse, Clare. “Analysis of the Government of Canada’s April 2007 Greenhouse Gas Policy Announcement” (May 28, 2007), online: The Pembina Institute <<http://www.pembina.org>>.**

Clare Demerse is a policy analyst with the Pembina Institute’s Climate Change Program. Matthew Bramley is a well-known author of numerous reports and articles on climate policy and is also a director of the Pembina Institute’s Climate Change Program. The authors analyze the issues of the federal government’s "Turning the Corner" plan. They conclude that the proposed regulations have little chance of meeting the government's target of stopping the growth in Canada's greenhouse gas pollution by 2012 and that it is in need of an improvement. I am interested in this

article because it highlights numerous issues that undermine the credibility of the government's target for 2020, which is to limit Canada's emissions to about 2 percent above the 1990 level.

**Bromley, Matthew and Demerse, Clare. “Choosing Greenhouse Gas Emission Reduction Policies in Canada” (October 24, 2008), online: The Pembina Institute <<http://www.pembina.org>>.**

Clare Demerse is a policy analyst with the Pembina Institute’s Climate Change Program. Matthew Bromley is a well-known author of numerous reports and articles on climate policy and is also a director of the Pembina Institute’s Climate Change Program. This study examines the policy tools that the Canadian federal and provincial governments have at their disposal to reduce greenhouse gas emissions by assessing their environmental effectiveness, economic efficiency, fairness and cost-effectiveness. This article helps me better understand the strengths and weaknesses of these policy options.

**Bromley, Matthew and Demerse, Clare. “The March 2008 Federal Regulatory Framework for Industrial Greenhouse Gas Emissions” (March 21, 2008), online: The Pembina Institute <<http://www.pembina.org>>.**

Clare Demerse is a policy analyst with the Pembina Institute’s Climate Change Program. Matthew Bromley is a well-known author of numerous reports and articles on climate policy and also a director of the Pembina Institute’s Climate Change Program. This report analyses the key features of the March 2008 updated “Turning the Corner” proposal. This report is relevant because it highlights the fundamental weaknesses of the updated federal emissions trading legislation I could use for my research.

**Ellerman, A. Denny and Joskow, Paul L. “The European Union’s Emissions Trading System in Perspective”, online: Pew Centre on Global Climate Change**

**<<http://www.pewclimate.org>>.**

Both authors are economists of the Massachusetts Institute of Technology. In this report they examine the development, structure, and performance of the European Union’s Emissions Trading System (EU-ETS) to date, and provides insightful analysis regarding the controversies and lessons emerging from the initial trial phase. The authors explain some of the controversies regarding the early performance of the EU-ETS and describe potential remedies planned for later compliance periods. In regard to my thesis, this article helps me to understand the key features and the performance of the EU-ETS. It also provides many important lessons for policy-makers to consider when developing appropriate short and long-term measures to limit greenhouse gas emissions.

# Annotated Bibliography:

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## Property and Contractual Arrangements Underlying Enhanced Oil Recovery Involving Carbon Capture and Storage Projects: A Case Study

Sasha Ransom

12/2/2009

The following is an annotated bibliography for my thesis as an LL.M. candidate at the University of Calgary. The bibliography is a work in progress. I have intentionally left out jurisprudence as it will not form part of my research and analysis into the current legal and regulatory framework of carbon capture and storage (“CCS”) operations.

The objective of my thesis is to evaluate the property and contractual framework that underlies an enhanced oil recovery project (“EOR”) involving CCS in the province of Saskatchewan. In order to evaluate the framework in Saskatchewan, I will compare the legal and regulatory frameworks in Australia, Canada and the United States.

#### LEGISLATION: STATUTES

*Canadian Environmental Protection Act, 1999*, S.C. 1999, c. 33.

*Mineral Resources Act, 1985*, S.S. 1984-85-86, c. M-16.1.

*National Energy Board Act*, R.S.C. 1985, c. N-7.

*Oil and Gas Conservation Act*, R.S.S. 1978, c. 0-2.

*Pipelines Act, 1998*, S.S. 1998, c. P-12.1.

#### LEGISLATION: REGULATIONS

*Oil and Gas Conservation Regulations, 1985*, R.R.S., c. O-2, Reg. 1.

*Pipelines Regulations, 2000*, R.R.S., c. P-12.1, Reg.1.

#### SECONDARY MATERIAL: ARTICLES

Acorn, Glen & Michael W. Ekelund. “An Overview of Alberta’s Recent Legislation on Natural Gas Royalty Simplification and Gas Storage” (1995) 33 Alta. L. Rev. 342.

Bachu, Stephan. “Legal and Regulatory Challenges in the Implementation of CO<sub>2</sub> Geological Storage: An Alberta and Canadian Perspective” (2008) Int’l J. Greenhouse Gas Control 259.

Stephan Bachu is a Nobel Laureate and is an expert in the area of climate change mitigation using CCS. In this article, the author reviews the current legal and regulatory framework in Alberta and Canada with respect to its application to CCS, and concludes that the existing framework, with some modification, is sufficient to accommodate CCS

operations. However, he notes that governments in Canada and elsewhere need to address several pressing issues dealing with the CCS post-operational phase. This is an insightful evaluation of the framework, and I will further research this suggestion in my thesis. This article is useful for my research because it sets out the present legal and regulatory frameworks in Alberta and Canada, specifically addressing the issues of property, liability and regulatory regimes, and makes some suggestions for change. I can apply these frameworks to the Saskatchewan framework and determine where changes could be made to the legislation or addressed through contractual arrangements.

Bankes, Nigel & Jenette Poschwatta. "Carbon Capture and Storage in Alberta: Learning from the Acid Gas Disposal Analogy" (2007) 97 Resources 1, online: Canadian Institute of Resources Law <<http://www.ucalgary.ca/~cirl/pdf/Resource97.pdf>>.

Nigel Bankes, Professor at the University of Calgary, Faculty of Law, and author of numerous articles in the area of carbon capture and storage, is an expert in the area of natural resources law. Jenette Poschwatta, Research Associate at the Canadian Institute of Resources Law, is currently working on her LL.M. at the University of Calgary, Faculty of Law with her supervisor, Nigel Bankes. This article focuses on Alberta's experience with acid gas disposal ("AGD"). This article considers the property, regulatory and liability issues associated with AGD. This AGD analysis provides a useful analogy that assists in understanding CCS projects because the issues are similar and many of the regulations are applicable to both types of projects. This article assists my research by providing an analysis for AGD that can be similarly applied to CCS and EOR projects.

Bankes, Nigel & Jenette Poschwatta. "Draft Australian Legislation on Carbon Capture and Storage: A Canadian Perspective" (2008) 102 Resources 1, online: Canadian Institute of Resources Law <<http://dspace.ucalgary.ca/bitstream/1880/47035/1/Resources102.pdf>>.

In this paper, the authors focus on the Australian proposals for CCS legislation and offer some comments on the Australian legislation from a Canadian perspective. The comments fall into four main groups: the tenure scheme; the regulatory scheme; liability related issues and miscellaneous issues. These elements are premised on the adaptation of the current petroleum and natural gas tenure system for CCS purposes. The comments that are provided will assist with my research as they shed light on a proposed framework for property and contractual issues arising from EOR operations involving CCS in Australia and Canada. This paper is very useful because it offers a detailed comparative analysis between Australian and Canadian legislation.

Bankes, Nigel, Jenette Poschwatta & E. Mitchell Shier. "The Legal Framework for Carbon Capture and Storage in Alberta" (2007-2008) 45 Alta. L. Rev. 585.

Nigel Bankes and Jenette Poschwatta join E. Mitchell Shier, Counsel in the Energy Group at Heenan Blaikie in Calgary, Alberta, to write this article. In this article, the authors examine the property, regulatory, and liability issues associated with CCS in an Alberta context. The authors draw upon existing law and practice in relation to analogous activities including EOR, acid gas disposal, and natural gas storage to identify issues that need to be addressed in order to develop an appropriate legal framework for CCS. The article first discusses the key features of the four stages of CCS: (1) capture; (2) transport

(to the injection well); (3) injection; and (4) post-closure. Second, the article discusses the main barriers to the adoption of CCS. The main portion of the article then discusses the property, regulatory and liability issues, which is the most useful portion for applying to my thesis project. The chapters on property and liability issues are of particular interest to me because the authors discuss fee simple title, split title, surface rights and liability issues and analyze them with respect to gas storage rights and acid gas disposal. I can apply these issues to the Saskatchewan framework and determine how the Project proponents have or should have addressed property and contractual issues.

McLaren, James and James Fahey. “Key legal and Regulatory Considerations for the Geosequestration of Carbon Dioxide in Australia” (2005) 24 Australian Resources & Energy L.J. 46.

The authors are natural resource solicitors at Australian law firm, Mallesons Stephen Jaques. It appears that the authors wrote this article for an audience of legislators because the main purpose of the article is reform. The authors provide a general overview of geosequestration technology, identifying key existing regulations and international laws that are likely to impact on Australian geosequestration projects and discuss possible legislative reform. This article should be read in conjunction with the Australian Guiding Principles and the article written by Bankes and Poschwatta on Australia’s draft legislation. These sources are useful for my thesis because they provide me with a comprehensive view of the Australian approach, which includes proposals for legislative reform and a case study of the Gorgon CCS Project in Western Australia. It will be useful for me to compare the Australian legal and regulatory proposals to the current framework in Saskatchewan and Canada.

Marston, Philip & Patricia Moore. “From EOR to CCS: The Evolving Legal and Regulatory Framework for Carbon Capture and Storage” (2008) 29 Energy L. J. 421.

Philip Marston is an energy regulatory attorney in Alexandria, Virginia, practicing at Marston Law, and Patricia Moore is an oil and gas attorney practicing in Dallas, Texas. Each of the authors has been practicing for over 30 years in their respective field. The authors wrote this article for an audience of legislators as the main purpose of the article is reform of the existing United States’ legal and regulatory framework for CCS. The authors begin by reviewing the existing United States’ framework and identifying those aspects that appear adequate to govern the sale, transport, and injection of CO<sub>2</sub> for CCS purposes. Building on this analysis, the authors conclude that the current legal and regulatory framework will be adequate from an interim standpoint to allow parties to structure a transition from CO<sub>2</sub> storage that is a result of oil production operations to those incremental injections of CO<sub>2</sub> intended solely for permanent underground storage. This article is useful for my research because it provides a very detailed review of the United States’ legal and regulatory framework for EOR involving CCS. It also goes a step further and provides suggestions for legislative change with respect to CO<sub>2</sub> storage and disposal in cases that do not involve EOR operations. I can compare and contrast the United States approach to the Canadian framework.

Reiner, D.M. & H.J. Herzog. “Developing a set of Regulatory Analogues for Carbon Sequestration” (2004) 29 Energy 1561.

David M. Reiner, Professor at the University of Cambridge, Judge Institute of Management, has written many articles in the area of climate change and CCS. Howard J. Herzog is a chemical engineer and is the Program Director for the Carbon Sequestration Initiative at the Laboratory for Energy and the Environment at MIT, and is an expert in the area of carbon sequestration. In this article, the authors discuss potential regulatory analogs that could be applied to the regulatory framework for CCS. To better understand a potential regulatory system for CCS, the historical evolution of comparable regulatory regimes is discussed. Other long-term storage problems that have at least some of the characteristics of CCS are evaluated according to the nature of risk, the credibility of the solutions, the regulatory environment and the potential to either borrow from or influence other policy problems across geographic boundaries. Though none are exact analogs, as a whole, the set offers variation in key variables critical for determining the success of CCS. For my thesis project, the article is helpful in that it provides general frameworks for dealing with EOR projects involving CCS or acid gas. However, it is not useful for understanding the specifics relating to property or contractual rights between the Project proponents.

Wilson, Elizabeth *et al.* "Regulating the Geological Sequestration of Carbon Dioxide" (2008) 42 *Envtl. Sci. & Tech.* 2718.

#### SECONDARY MATERIAL: COLLECTION OF ESSAYS

Bachu, Stefan & Kristine Haug. "In Situ Characteristics of Acid-Gas Injection Operations in the Alberta Basin, Western Canada: Demonstration of CO<sub>2</sub> Geological Storage" in Sally M. Benson, ed., *Carbon Dioxide Capture for Storage in Deep Geologic Formations - Results from the CO<sub>2</sub> Capture Project: Geologic Storage of Carbon Dioxide with Monitoring and Verification*, vol. 2 (Amsterdam: Elsevier, 2005) 867.

Bankes, Nigel & M. Roggenkamp. "Legal Aspects of Carbon Capture and Storage" in Donald N. Zillman *et al.*, eds., *Beyond the Carbon Economy: Energy Law in Transition* (Oxford: Oxford University Press, 2008) 339.

#### OTHER MATERIAL: PAPERS

Bankes, Nigel. "Legal Issues Associated with the Adoption of Commercial Scale CCS Projects" (Carbon Capture and Storage: A Pembina-ISEEE Thought Leader Forum, delivered at the University of Calgary, 10 November 2008), (Drayton Valley, Alta: The Pembina Institute, 2008), online: The Pembina Institute <<http://pubs.pembina.org/reports/ccs-discuss-legal.pdf>>.

In this paper, the author discusses the legal and regulatory challenges associated with the adoption of commercial scale CCS projects, and focuses on property and regulatory issues in Alberta. With respect to property issues, the paper discusses ownership of pore space, the need for a Crown disposition system and surface rights. With respect to regulatory issues, the paper discusses how a storage project would be dealt with under the

current Alberta regulatory framework, the federal role in geological sequestration projects, and the implications of listing carbon dioxide as a toxic substance under the *Canadian Environmental Protection Act*. This paper will be useful for my thesis project because it will provide a starting point for determining potential property and regulatory frameworks for which my case study may fit. With respect to potential liability issues, I will need to look at other sources, such as Bankes' article, "The Legal Framework for Carbon Capture and Storage in Alberta."

Flory, Augustin. "Legal Aspects of Storing CO<sub>2</sub>" (Paper prepared for the International Energy Agency, 2005), online: International Energy Agency <[http://www.iea.org/textbase/nppdf/free/2005/CO2\\_legal.pdf](http://www.iea.org/textbase/nppdf/free/2005/CO2_legal.pdf)>.

The author is an employee of the International Energy Agency and has written this article for an international audience of law and policy makers. This article is a detailed outline of the national and international legal frameworks for onshore and offshore CCS projects. The international framework deals mostly with offshore activities and discusses the London Protocol and the OSPAR Convention. I am more interested in the national frameworks which include a description of the national frameworks in Australia, Canada and the United States. In addition to describing the legal frameworks for these countries, the author also describes case studies in each country. This article is very useful as an overview of case studies, and national and international CCS issues.

Haefeli, Susanne, Martina Bosi & Cedric Philibert. "Carbon Dioxide Capture and Storage Issues – Accounting and Baselines under the United Nations Framework Convention on Climate Change (UNFCCC)" (Paper prepared for the International Energy Agency, May 2004), online: International Energy Agency <<http://www.iea.org/papers/2004/css.pdf>>.

The authors were employees of the International Energy Agency at the time of writing this paper. It appears that the authors were writing towards national legislators for the purpose of codifying international law. This paper was written for the purpose of focusing on CO<sub>2</sub> emission, accounting and baseline-related issues in CCS projects. The authors propose that CCS could be undertaken as part of a national or international scheme, such as the Kyoto Protocol's project-based mechanisms. Section 1 of this paper outlines the possibilities of capturing, transporting and storing CO<sub>2</sub> in order to crystallize the relevant definitions of CCS activities important for greenhouse gas accounting purposes. Section 2 reviews accounting issues for CCS activities. Section 3 discusses the possible methodologies of establishing baseline accounting for any escaped CO<sub>2</sub> under the project. Each of these sections is useful to my research as they provide the outline for understanding accounting and emission issues under a CCS project. It will be necessary for the Project proponents to address accounting and emission issues in their contractual arrangements.

Robertson, Kate, Jette Findsen & Steve Messner. "International Carbon Capture and Storage Projects Overcoming Legal Barriers" (Paper prepared for the National Energy Technology Laboratory, 23 June 2006), online: National Energy Technology Laboratory <<http://www.netl.doe.gov/energy-analyses/pubs/CCSregulatorypaperFinalReport.pdf>>.

This paper was written by three employees of the Science Applications International Corporation (“SAIC”). SAIC is a science and technology company that can be hired out to prepare research on behalf of their clients. The National Energy Technology Laboratory hired the authors to write a paper which examines the regulatory developments of major CCS projects to determine actual progress in regulating such projects. The first part of the paper highlights the major unresolved legal and regulatory issues related to CCS. The second part of the paper describes five case studies: Gorgon in Australia, In Salah in Algeria, Sleipner in Norway, RECOPOL in Poland, and CO<sub>2</sub>SINK in Germany, and highlights how each of these case studies have addressed regulatory issues related to CCS. This paper will be useful for my research because I may be able to apply some of the legal and regulatory solutions that have been applied by these particular case studies to the Project. However, the downside is that the descriptions of the legal and regulatory issues are general in nature so I will need to go to another source if I want to find out more about a particular case study.

#### OTHER MATERIAL: GUIDELINES

*Australian Guiding Principles*, Ministerial Council on Mineral and Petroleum Resources, *Carbon Dioxide Capture and Geological Storage: Australian Regulatory Guiding Principles* (2005), online: Australian Government: Department of Innovation, Science and Research <<http://www.industry.gov.au>>.

The Guidelines were released in 2005 and they were intended to establish consistent regulations for CCS across state and federal jurisdictions. The Guidelines address all stages of a CCS project. There are several important regulatory definitions established by the Guidelines which will be of great assistance to me in determining necessary steps in the CCS project set-up. For instance, the Guidelines separate the CCS process into four distinct stages: capture, transport, injection and post-closure, with recommendations for regulatory steps for each distinct stage. I will apply these stages to my analysis and determine the property, contractual and regulatory set-up for each stage in the Project. The Guidelines also make a clear delineation between the injection and post-closure stages, with post-injection fitting within the injection stage and decommissioning and site rehabilitation fitting within the post-closure stage. This distinction is important as it determines the transmission between private and public liability. The Guidelines will greatly assist my research because they will essentially provide a guide for the legal requirements needed for each stage of a CCS project.

#### OTHER MATERIAL: WEBSITES

Online: The Pembina Institute <<http://pembina.org>>.

Online: The Canadian Institute of Resources Law < <http://cir1.ca/>>.

Online: Environment Canada <<http://www.ec.gc.ca/>>.

Online: International Energy Agency <<http://www.iea.org/>>.

Online: The Intergovernmental Panel on Climate Change <<http://www.ipcc.ch/index.htm>>.

### INTERNATIONAL MATERIALS: TREATIES

*Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 11 December 1997, UN Doc. FCCC/CP/1997/7/Add. I, 37 I.L.M. 22 (entered into force 6 February 2005).