International Investment Agreements
and Investments in Renewable Energy*

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* This report was prepared with major contributions from graduate researchers working in the Yale Environmental Protection Law Clinic, including Virginia Lacy, Katherine Hamilton, Heather Kaplan and Kate Zyla. Many thanks to Dale Bryk, the leader of the Clinic, for sponsoring this work.
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1.0 EXECUTIVE SUMMARY

International investment law consists of a number of bilateral investment treaties, multilateral investment treaties, and plurilateral sectoral agreements, layered over customary international law. Investment in renewable energy is also influenced by policies intended to promote particular energy sources (including renewables) and to address climate change, as well as broader market forces in the energy sector.

In order to build an international legal framework that helps to increase investment in renewable energy, the current barriers to such investment must be considered, as well as the history of the debates over international investment agreements (such as for the Multilateral Agreement on Investment and the Free Trade Agreement of the Americas).

While our review of issues at the intersection of international investment law and investments in renewable energy is continuing, our preliminary results suggest that the following areas should be considered when developing any international legal framework designed to help bring more investment into the renewable energy sector:

- Identify clearly the benefits of the potential investment agreement to businesses (increase predictability of host state action and investor responses thereto), host states (affirm right to regulate within traditional boundaries, attract more private investment), and civil society organizations (more investment in cleaner energy solutions) so that the negotiations have broad and strong support.

- Be as transparent as possible in and around the negotiations, including outreach to a wide range of stakeholders in both business and civil society.

- Include clear definitions of “investment,” “investor,” and “expropriation” so that parties to the agreement can understand the balance being created between private and public interests.

- Include a broad enough definition of “investment” to ensure that investments in “hybrid property” such as tradable renewable energy certificates (TRECs) and greenhouse gas emission allowances are protected.

- Clearly support the host states “right to regulate” in a non-discriminatory (at least with respect to foreign investors) manner on matters relating to climate protection and cleaner energy.

- Expressly provide that energy from renewable sources is not “like” energy from non-renewable sources for purposes of government support.

In addition, even in the absence of any new international agreements on investment in renewable energy or more generally, action should be considered in the following areas to help expand the investment in renewable energy:

- Supporting efforts to articulate general investment principles to reflect in any international investment agreement (IIA), other international agreement, national or regional policy regime.
Continuing to encourage national and international policy makers to incorporate clean energy into their infrastructure investment planning efforts.

Pursuing the opportunities offered by the post-Kyoto discussions to expand the incentives for investments in renewable energy.

Continuing to build the infrastructure for linking private investors into such policy discussions.

Continuing to build the infrastructure for linking public and private pots of money dedicated to expanding the use of cleaner energy.

2.0 OVERVIEW

This paper analyses the links between the provisions of international investment agreements and the expansion of investment in renewable energy projects. It does not include an analysis of investment issues related to research and development. In addition, while the paper considers a range of policies being used to promote renewable energy in a number of countries, it does not evaluate the specific policies adopted in any individual country.

The first part of this paper provides an introduction to the variety of international agreements that exist on investment, as well as the key concepts reflected in those different agreements. The second part provides an introduction to the market for investment in renewable energy, as well as the policies adopted by governments to promote additional investment. The third part links these two areas by looking at both: (1) the potential barriers to government efforts to increase investment in renewable energy arising from the provisions of international investment agreements; and (2) the potential opportunities to use international investment initiatives to increase such investment. The final section offers some suggestions for further work on using international legal activities to increase investment in renewable energy.

3.0 INTRODUCTION TO INTERNATIONAL INVESTMENT AGREEMENTS

In the late 18th century, countries began negotiating bilateral commercial treaties that addressed some of the issues facing both international investment and trade. (UNCTC/ICC, 1992) (US DOT Maritime Administration, 2004). The first multilateral efforts to address both investment and trade issues came in 1948 with the Havana Charter, an attempt to form the International Trade Organization (ITO) (Koulen, 2001). This effort failed, in part, because the United States (US) Senate would not ratify the treaty. One of the Senate’s primary concerns was the investment section (Cosbey et al., 2004).

While the broader ITO effort failed, the General Agreement on Trade and Tariffs (GATT) was established, which covered trade but not investment (WTOa). In 1955, the GATT Resolution on International Investment for Economic Development was
adopted. The resolution recommended that bilateral investment treaties (BITs) and multilateral investment treaties (MITs) (together, international investment agreements (IIAs)) be used to stimulate investment (Koulen, 2001). However, the GATT signatories took little follow-up action on the MIT front. The first BIT was executed in 1959 by Germany and Pakistan, and was soon followed by other countries, including Switzerland, France, and the Netherlands (UNCTC/ICC, 1992).

Other international organizations also started to focus on international investment in the 1960s. In 1961, the Organization for Economic Cooperation and Development (OECD) was formed and adopted the Codes of Liberalisation of Capital Movements and of Current Invisible Operations (OECD, 2003). The driving force behind the codes was the belief that the free circulation of capital, investment, and services across national borders would lead to economic growth, employment and development. This was followed by a Draft Convention on Investment in 1967.4

In 1965, the Executive Directors of the World Bank drafted the Convention on the Settlement of Investment Disputes between States and Nationals of Other States, which established the International Centre for Settlement of Investment Disputes (ICSID) (ICSID, 2005). The purpose of the ICSID is to provide facilities for conciliation and arbitration of investment disputes between Contracting States and nationals of other Contracting States (ICSID, 2005).

Debate over international investment issues intensified in the 1970s. For example, data collected by the Center for Multinational Studies in Washington DC noted that the mid-1970s saw the highest number of nationalizations (“expropriations”) of foreign-owned property by governments ever recorded (Chifor, 2002). The 1976 OECD Declaration on International Investment and Multinational Enterprises was one response. Its purpose was to create a “policy commitment to improve the investment climate, encourage the positive contribution multinational enterprises can make to economic and social progress and minimize and resolve difficulties which may arise from their operations.” (OECD, n.d.a)

By the 1980s, however, international attitudes were changing, and foreign direct investment (FDI) was generally seen as an opportunity for growth and prosperity around the world (UNCTAD, 2004a). This led to a rapid increase in the number of international investment agreements being adopted, particularly BITs. For example, the US released its first model BIT in 1982 (UNCTC/ICC, 1992).

The result is that over the past few decades, thousands of BITs have been agreed, several plurilateral sectoral agreements have been adopted (particularly in the energy area), and considerable effort has been spent attempting to expand the number of MITs in force. The basic goal of all of these IIAs is to find a balance between protecting the rights of investors (so that they will invest more) and the rights of the public in the recipient country (so that the investment will have beneficial effects within that country). As such, they share a small number of key concepts for addressing the areas of historical dispute between investors and states. These key concepts are discussed in section 3.5 below, after more detailed descriptions of some of the major IIAs.

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4 See 7 International Legal Materials (ILM) 117 (1968).
3.1 Bilateral Investment Treaties
The United Nations Commission on Trade and Development (UNCTAD) defines BITs as “agreements between two countries for the reciprocal encouragement, promotion and protection of investments in each other’s territories by companies based in either country.” (UNCTAD, 2004b). Germany and Pakistan signed the first modern bilateral investment treaty in 1959 (World Bank Group, n.d.). However, BITs were not common until the 1980s. It is important to note that until 1985, most BITs did not have provisions allowing for arbitration of disputes between investors and States. They only provided State-State arbitration. In 1989, 389 BITs had been ratified. With the huge increase in foreign investment during the 1990s, the number of BITs increased to 2,265 by 2003 (UNCTAD, 2004b). Over 170 countries were signatories to BITs as of 2003.

Figure 1 BITs 1990–2002

While, by definition, each BIT is different – as they are agreements between two sovereign nations – they are often built around “model” agreements. For example, Model BITs have been developed and released by the Canadian (Canada, 2003), Chinese (UNCTAD, 2004c), Indian (Republic of India, n.d.) and US (US, 2004) governments. These four model BITs are used for the analysis of key concepts and linkages with investments in renewables presented below.

3.2 Multilateral Treaties with Investment Provisions
In addition to BITs, there has also been an increase in MITs and regional trade agreements with investment provisions. Theses include:

- The North American Free Trade Agreement (NAFTA, n.d.)
The perceived success of NAFTA, combined with the proliferation of BITs in the 1980s, also led to a series of efforts to adopt both new regional and global agreements with investment provisions. The three leading efforts in this regard are:

- The Free Trade Area of the Americas (FTAA, 2003)
- The Multilateral Agreement on Investments (MAI) proposed by the OECD
- The investment discussions taking place within the context of the World Trade Organization (WTO)

Finally, in reaction to the debates over how environmental and social issues are addressed in these proposed agreements, the International Institute for Sustainable Development (IISD) has offered a model investment agreement that specifically addresses sustainable development issues.

Each of these existing and proposed MITs is described briefly below.

### 3.2.1 Energy Charter Treaty


The ECT grew out of energy security concerns at the time of the collapse of the Union of Soviet Socialist Republics (now Commonwealth of Independent States) (USSR). According to the *Energy Charter Treaty: A Readers Guide* (Karl et al.), the purpose of the ECT is to create “a stable, comprehensive and non-discriminatory legal foundation for cross-border energy relations . . . [that] . . . reduces political risks associated with economic activities in transition economies . . . [with a] . . . commitment to achieve the following common goals:

- To provide open energy markets, and to secure and diversify energy supply;
- To stimulate cross-border investment and trade in the energy sector;
- To assist countries in economic transition in the development of their energy strategies and of an appropriate institutional and legal framework for energy, and in the improvement and modernization of their energy industries.”

The ECT promotes FDI in the energy sector by protecting foreign investors against discrimination, expropriation, losses resulting from strife, transfer restrictions, and
the breach of individual investment contracts. It also contains a strong mechanism for dispute resolution that includes investor-state arbitration and state-state arbitration.

As part of the ECT, the energy charter conference was formed as the governing and decision-making body for the Energy Charter process. All states that have signed or acceded to the Treaty are members of the Conference. The purposes of the energy charter conference are to discuss policy issues affecting energy cooperation among the signatories; review implementation of the treaty and the Protocol on Energy Efficiency and Related Environmental Aspects; and consider possible new instruments and projects on energy issues (ECT website, n.d.). In addition, the ECT allows for interested parties to have informal contact (observership) with the ECT.

3.2.2 NAFTA

NAFTA’s history begins in the 1980s, a time when the US government did not believe that the GATT was addressing its trade issues and so began pursuing more regional agreements (McKinney, 2000). In 1984, the US Congress passed the Trade and Tariff Act, which proclaimed the US’s desire to negotiate free trade agreements. The US and Canada began discussing a bilateral free trade agreement in 1985 at the Shamrock Summit in Quebec. Negotiations for such an agreement began in 1986, the agreement was signed on January 2, 1988, and it went into effect January 1, 1989. (McKinney, 2000).

At the same time, in response to economic pressures, Mexico began instituting trade liberalizing policies (McKinney, 2000). Mexico signed a bilateral trade agreement with the US in 1985, joined GATT in 1986, and in 1987 implemented a framework of principles and procedures for consultation regarding trade and investment relations. In 1990, the US and Mexico expressed their desire to negotiate a free trade agreement between the two countries.

As a result, the Canadian government was concerned that there would be an incentive for companies to locate in the US instead of Canada because the US would have unrestricted access to the entire North American market (McKinney, 2000). Therefore, on February 5, 1991, Canada, the United States, and Mexico, agreed to begin formal negotiations on a North American Free Trade Agreement (NAFTA).

NAFTA negotiations formally began on June 12, 1991. NAFTA was signed on December 17, 1992 and entered into force on January 1, 1994 (NAFTA Secretariat, 2004). NAFTA formed the world’s largest free trade area at that time, representing about one third of the world’s gross domestic product (USTR, 2004a).

NAFTA Chapter 11 covers investors and investments. The purpose of the investment portion of NAFTA is to foster “an environment of confidence and stability required to make long-term investments and partnering commitments . . . with a strong, certain and transparent framework for investment.” (USTR, 2004b). Since the adoption of NAFTA, North America has attracted record levels of FDI, including:

- “In 2000, FDI by other NAFTA partners in the three countries reached US$299.2 billion, more than double the US$136.9 billion figure registered in 1993.” (USTR, 2004c)
“NAFTA has also stimulated increased investment from countries outside of NAFTA. North America now accounts for 23.9 percent of global inward FDI and 25 percent of global outward FDI.” (USTR, 2004c)

In part, NAFTA was able to help enhance this environment of investment confidence because NAFTA was the first investment treaty to have a formal dispute resolution system (McIlroy, 2002). Disputes under NAFTA have been one of the most active areas in examining the balance between investors’ and governments’ interests in the expropriation arena (see below).

3.2.3 Central American-Dominican Republic Free Trade Agreement (CAFTA-DR)

The Central American-Dominican Republic Free Trade Agreement (CAFTA-DR) grew out of the successful NAFTA negotiations and the stalled FTAA negotiations (described below). On October 1, 1992, the US Congress was informed of the President’s desire to negotiate a free trade agreement with Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. CAFTA negotiations formally began in January 8, 2003. On August 4, 2004 the US Congress was informed of the President’s desire for the negotiations to include the Dominican Republic. Negotiations with the five Central American countries were completed on May 28, 2004. The Dominican Republic negotiations were completed on August 5, 2004. By December 31, 2005 the United States, the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua have all ratified CAFTA-DR. As of December 31, 2005 Costa Rica had not yet ratified the treaty. The treaty has a rolling implementation process. The US completed the implementation legislation in August 2005. As of January 31, 2006 none of the other signatories had completed the implementation process.

The CAFTA-DR contains both investment and trade provisions. Similar to NAFTA, the purpose of CAFTA-DR is to eliminate barriers to trade, facilitate the movement of goods and services, promote fair competition, and increase investment opportunities. Unlike NAFTA, which addresses environmental issues in a separate side agreement, CAFTA’s environmental provisions are enforceable parts of the core trade agreement. In particular, it is notable that CAFTA specifically notes that nondiscriminatory regulatory actions to protect public welfare do not constitute “indirect expropriations” except “in rare circumstances.” (USTR 2005a). In addition, CAFTA has a more open and transparent investment arbitration process than NAFTA (USTR 2005b). For example, in CAFTA hearings and documents are open to the public and amicus curiae submissions are authorized. (USTR 2005a)

3.2.4 Other Regional Investment Agreements

In addition, there are numerous other regional investment agreements and model treaties. Some of these include:

- Asia Pacific Economic Conference (APEC) Agreement on Investment Principles (APEC website, n.d.)
- Mercado Comun del Cono Sur (MERCOSUR; Southern Cone Common Market) (MERCOSUR website, n.d.)

Note that this appeared before in the Chile-US FTA. It is also part of the Annex of expropriation.
In general, all such regional agreements are designed to improve the climate for investment and include provisions similar to those found in other regional investment agreements (see discussion below). As such, they will not be considered further in this paper.

3.2.5 Proposed Multilateral Agreement on Investment

In the 1980s and early 1990s, foreign direct investment (FDI) was generally seen as having a positive influence on host country economies (Sikkel, 2001). The OECD determined there was a strong case for a Multilateral Agreement on Investment (MAI) to help expand FDI still further (Sikkel, 2001). Negotiations for the MAI began in May 1995. The MAI was intended to be a “free standing international treaty, open to all OECD Members and the European Communities, and to accession by non-OECD Member Countries [that would] provide a broad multilateral framework for international investment with high standards for the liberalization of investment regimes and investment protection and with effective dispute settlement procedures.” (OECD, n.d.b).

The draft MAI contained many of the same clauses found in typical BITs. Negotiations initially progressed well, however, several areas of disagreement remained on key concepts (see discussion below). Other problems also began to surface in early 1996, when grassroots advocacy organizations in the US and Canada expressed concern about the lack of openness in the negotiations and the possible environmental consequences of the MAI. In response, the MAI negotiators convened a discussion group on the environment in October 1996 (Sikkel, 2001).

The draft MAI included proposed language in the preamble that addressed sustainable development. However, the MAI draft negotiating text notes indicated that there was considerable disagreement as to whether the proposed language provided for the proper balance between encouraging investment and protecting the environment.8

A group of 50 non-government organizations (NGOs) released a Joint NGO Statement on the MAI on October 27, 1997. Among other things, the statement expressed concerns about the expropriation and performance requirements sections of the MAI. It is worth noting that these concerns were similar to those being expressed about the impact of NAFTA on the ability of member states to regulate environmental issues within their borders.

In May 1998, amid the on-going controversy, the negotiations stalled. In December 1998 the negotiations were discontinued (OECD, n.d.b). There are several reasons the MAI negotiations failed. In addition to NGO opposition, the MAI had only limited
support among the business community (UNCTAD, 1999; Sikkel, 2001). As Sikkel noted “with regard to the treatment of established investors regarding subjects like expropriation or transfers of currency, no real problems exist. Dispute settlement may not always be quick or cheap, but in general there is a lot of trust in the instruments available at present.” (Sikkel, 2001). So, the business community did not perceive that the MAI offered protections that were not already available under other instruments. In addition, the MAI did not address many of the market access concerns of the business community, such as subsidies (Sikkel, 2001).

The opposition from NGOs and the weak support from the business community were coupled with limited government support. Many of the OECD countries had elections and subsequently underwent political changes toward a more protectionist stance. Many of the OECD governments also perceived few problems with the existing investment regime. That combined with the opposition of the NGOs and limited support of the business community, led to a reduced enthusiasm for the MAI (UNCTAD, 1999). All of these factors converged at a time when the OECD was working under a tight deadline for resolving the MAI negotiations. The deadline, weak support, and strong opposition, all led to the ultimate failure to reach an agreement on the MAI.

3.2.6 Proposed Free Trade Area of the Americas

NAFTA went into effect on January 1, 1994. Subsequently, at the Summit the Americas in December 1994, 34 governments decided to progressively eliminate barriers to trade and investment by creating a Free Trade Area of the Americans (FTAA) by the year 2005. The FTAA was essentially intended to expand NAFTA to every country in Central America, South America and the Caribbean, except Cuba.

Negotiations for the FTAA started at the Santiago Summit held in Santiago, Chile in April 1998. The Trade Negotiations Committee was formed at this summit. There were several subsequent ministerial-level meetings, including in Quebec City in April 2000, Buenos Aires in April 2001, and in Quito, Ecuador in October 2002. Then, at the Ministerial in Miami in November 2003, negotiators reduced the scope of the FTAA, reportedly because of growing divergences between the negotiating parties (Global Exchange, 2005).

The most recent published draft agreement was released in 2003. Chapter 17 covers investors and investment. Negotiations continued in Puebla, Mexico in February 2004 and Buenos Aires, Argentina in April 2004. The trade negotiations committee co-chairs met in Washington DC in February 2005 and issued a statement that negotiations were moving forward and that they planned to meet again in March (FTAA Trade Negotiations Committee, 2003). No record of a March meeting has been released to the public.

The FTAA was again discussed at the Fourth Summit of the Americas, held in Mar del Plata, Argentina in November 2005. The resulting November 5 ministerial “Declaration of Mar del Plata” item 19 addressed the FTAA. Item 19 identified two different positions that the declaration signatories maintained with respect to the FTAA. One position was that while there have been significant difficulties in the
FTAA negotiations these parties remained committed to creating a “balanced and comprehensive FTAA Agreement that aims at expanding trade flows and, at the global level, trade free from subsidies and trade-distorting practices, with concrete and substantive benefits for all, taking into account the differences in the size and the levels of development of the participating economies and the special needs and special and differential treatment of the smaller and vulnerable economies.” (Mar Del Plata Declaration, 2005). The countries maintaining this position went on to instruct their trade negotiators to resume meetings in 2006. The other position was that “[o]ther member states maintain that the necessary conditions are not yet in place for achieving a balanced and equitable free trade agreement with effective access to markets free from subsidies and trade-distorting practices, and that takes into account the needs and sensitivities of all partners, as well as the differences in the levels of development and size of the economies.” (Mar Del Plata Declaration, 2005).

In response to the opposing viewpoints, there was an agreement to evaluate further both positions after the next WTO ministerial meeting, held in Hong Kong in December 2005. However, our research did not reveal any major subsequent activities in this area.

3.2.7 Proposed Agreement on Sustainable Investments

The International Institute for Sustainable Development (IISD) is a non-profit, policy research institute founded 1990. The IISD’s mission is “to champion innovation, enabling societies to live sustainably.” (IISD, 2006). IISD engages governments, NGOs, and others in an effort to promote “open and effective” international negotiations.

IISD has been involved in investment issues since 1999. In the spring of 2002, IISD participated in a series of meetings on NAFTA Chapter 11. In April 2003, IISD and Chatham House, London, jointly convened an experts’ workshop on “Trade and Sustainable Development Priorities Post-Doha” that discussed investment issues. IISD also participated in investment workshops held as part of the “Americas Trade and Sustainable Development Forum,” which was convened concurrently with the 2003 Ministerial Meeting of the FTAA.

These discussions led IISD to publish “Investment and Sustainable Development: A Guide to the Use and Potential of International Investment Agreements” in 2004. The guide acknowledged the importance of investment for sustainable development and discussed the role of IIAs. The IISD noted that many IIA arbitration decisions had significant ramifications for issues of public policy, for example a host state’s “right to regulate.” The guide stressed the need for IIAs to balance the rights of investors with a host state’s rights. The IISD further argued that “investment should foster sustainable development” (Cosbey, 2004) [emphasis added]. The IISD emphasized that in order for such a goal to be achieved, an IIA would need to both protect investors’ rights and a host states’ “right to regulate.”

The IISD then expanded upon this idea of a new type of IIA by publishing “A Model International Investment Agreement for the Promotion of Sustainable
Development” in November 2004 (von Moltke, 2004). The purpose of the model agreement is to shift the traditional IIA emphasis of protecting investor rights to a broader emphasis on sustainable development. The model aims to “identify possible issues for inclusion in an investment treaty and to develop a structure that could serve as a template for such a treaty . . . rather than seeking to establish a system of investor rights, the Agreement seeks to establish an institutional structure that permits a continuous balancing of investor rights and public goods in a manner that is legitimate, transparent and accountable.”

The model agreement contains a general provisions section, similar to that of traditional IIAs, but all the provisions emphasize the goal of investment for sustainable development. It also has a section on foreign investor rights and standards of treatment that is similar to traditional IIAs. However, there are several key differences between traditional IIAs and the IISD Model, including:

- A section on foreign investor responsibilities (e.g. corporate social responsibility)
- A section on host state’s rights, including the host state’s to regulate and right to maintain environmental standards
- A section on the host state’s responsibilities
- A section on the agreement’s relation to other IIAs, trade agreements, and international environmental agreements.

The model IISD agreement differs from other IIAs in its focus on rights and responsibilities in an effort to create an agreement that will encourage investment for sustainable development.

3.2.8 World Trade Organization Activities on Investment

The World Trade Organization (WTO) is addressing the issue of investment in three main areas (WTO, n.d.b):

Trade Related Investment Measures

On January 1, 1995, the Trade-Related Investment Measures (TRIMS) Agreement went into effect, as part of the Uruguay Round of negotiations. The purpose of TRIMS is to prohibit member countries from making the approval of investment conditional on compliance with laws, policies or administrative regulations that favor domestic products (UK DTI). The TRIMS agreement requires that host states not impose any TRIM that is inconsistent with the national treatment and quantitative restriction prohibitions in the GATT (see discussion below). The TRIMS agreement does not include a definition of “investment” or “trade related investment measure,” and does not require “most-favored nation status.” (Cosbey, 2004). The proponents of TRIMS saw the agreement as the WTO’s first step toward a more comprehensive investment agreement, however, many countries are resisting further WTO involvement in addressing investment issues (Cosbey, 2004).
General Agreement on Trade in Services

The General Agreement on Trade in Services (GATS) also went into effect on January 1, 1995, addressing foreign investment in services. All members of the WTO are signatories to the GATS. GATS contains rules that address foreign service suppliers establishing a “commercial presence” in a foreign market (WTO, 2001). The investment implications of GATS are primarily related to Article I.2, which implies that the basic protections of the GATS extend to investments that are integral to the service that is provided (Cosbey, 2004). The only use of the word “investment” in GATS occurs in Article XVI, market access, although investment provisions are also subject to Article XII (Restrictions to Safeguard the Balance of Payments) and Article XIV (General Exceptions) (Cosbey, 2004). These provisions bear little resemblance to the investment provisions found in other IIAs.

World Trade Organization Working Group on Trade and Investment

In 1996, a WTO Working Group was established to evaluate the relationship between trade and investment. The purpose of the WTO working group was to review existing IIAs and evaluate the usefulness of negotiating a multilateral framework for investment rules under the WTO. Although the WTO has addressed some investment issues with the TRIMs and GATS agreements, most investment is still regulated by BITs and MITs.

At the Doha Ministerial in 2001, several WTO members supported a recommendation to begin WTO negotiations for rules relating to foreign direct investment. Supporters of the recommendation noted that a multilateral framework for investment through the WTO could provide clarity and consistency not possible with the over 1,700 BITs then in effect. Supporters also tried to clarify that the new WTO framework would not be related to the OECD’s failed MAI attempt. Detractors stated that existing IIAs already provide adequate legal protection for investments and questioned the ability of a WTO investment framework actually to increase foreign direct investment (WTO, 2001). Because of the diverging views, the Draft Doha Ministerial Declaration of September 1, 2001, offered two options for further exploring the WTO's involvement in investment. Ultimately, a decision was made to continue the working group's research. Members were directed to clarify core issues and examine broader objectives. There was no consensus, and the members agreed on August 1, 2004 drop investment from the Doha agenda.

3.3 International Investment Dispute Resolution Agreements

Along with the proliferation of IIAs has come an increase in international investment disputes. Most international investment disputes are arbitrated through the World Bank Group’s International Centre for Settlement of Investment Disputes (ICSID). But, many IIAs allow investors to choose between ICSID and other arbitration organizations, such as United Nations Commission On International Trade Law (UNCITRAL, 1976), the International Chamber of Commerce (ICC) Court of Arbitration in Paris, the Stockholm Chamber of Commerce Arbitration Institute, the
London Court of International Arbitration and various other regional arbitration centers, particularly Singapore and Cairo.

It is difficult to determine the precise number of international investment disputes that have been arbitrated because ICSID is the only dispute resolution organization that has a public registry of claims. However, the ICSID data confirms that investment disputes have been on the rise.

Figure 2. Known investment treaty arbitrations (cumulative and newly instituted cases, 1987 – November 2006)


3.4 Core Concepts in International Investment Agreements

Although there are many different types of IIAs (as described above), they all share several core concepts. The primary concern is fairness – that foreign investors will be treated fairly by host country governments and that host countries will be treated fairly by investors. As such, IIAs are generally designed to provide protection for foreign investments beyond those available under domestic law, and to reduce the non-commercial risks that such investments face (UNCTC/ICC, 1992). International legal and dispute resolution structures that are not dominated by local governments are viewed by many international investors as providing a much more secure foundation for ensuring the agreements they reach are interpreted and applied fairly. As such, investors are more likely to invest. Host country governments, however, need to be confident that they can protect their national interests against unfair exploitation by investors. These “investor-state” disputes take several major forms and addressing those areas of dispute is the core purpose of IIAs.

As such, most IIAs offer a wide range of protections for both investors and states. Most investment agreements begin with a general statement that the agreement is being established to encourage investment and provide investment protections. A description of the coverage and scope of the agreement and a definition of the terms used in the agreement typically follow the general introduction. The agreements then typically address general standards of treatment, such as nondiscriminatory treatment, national treatment, and most-favored nation status. The agreements also
typically address specific standards of treatment such as prohibitions on performance requirements, transfers of funds and currency, expropriation and compensation, and dispute resolution. Some of the more recent investment agreements also include a discussion of environmental or social issues, specify exceptions from the agreement, or have other clauses to address issues not traditionally covered. A comparison of how several different IIAs address these issues is discussed below. The implications of these core concepts for efforts to increase investments in renewable energy are discussed in Section 5 below.

3.4.1 Coverage and Scope

The coverage and scope portions of an IIA describe the parties to the agreement, define the geographic coverage of the agreement, and typically set out when the agreement enters into force, the duration of the agreement, and the date for termination of the agreement. The coverage and scope section also defines key terms, such as what constitutes an “investment,” an “investor,” a “national,” a “company,” and “returns”. It may also include definitions for things like “protected information,” “regional level of government,” “state enterprise,” “territory,” and others.

The specifics of these definitions have far-reaching implications related to the rights and obligations of the contracting parties (UNCTC/ICC, 1992). For example, many agreements include a broad definition of “investment” that can include just about any kind of asset, while others purposely limit the definition in various ways to support the host country’s economic and development policies (UNCTAD, 2004a). “Investment” can also be defined as only including “direct investment” or may also include “portfolio investment” and “intangible assets” such as intellectual property (UNCTAD, 2004a). The specifics of the definitions can have significant implications related to renewable energy policies. For example, the definition of a TREC can influence which, if any, protections apply (see discussion in Section 5 below).

In addition, the scope and coverage sections often include exceptions to the agreements. Exceptions are usually for critical sectors such as energy and certain types of finance. These could potentially present barriers to investment in renewable energy. For example, under NAFTA, the generation, transmission, distribution, and sale of electricity is a “strategic area reserved to the state” of Mexico (Annex 602.3 1(c) and Annex III to the investment chapter) (Watkins, 1999). Therefore, while there are opportunities for private investment in electricity generation in Mexico, any power that is not used on-site must be sold to Mexico’s State-owned electric company. These Mexican energy exemptions under NAFTA could also create disincentives for purchasing renewable energy from foreign investors (Harmin, n.d.).

Conversely, plurilateral sectoral agreements typically limit the coverage of the agreement based on the sector the agreement is designed to address. For example, in the Energy Charter Treaty, “investment’ refers to any investment associated with an economic activity in the energy sector and to investments or classes of investments designated by a contracting party in its area as ‘charter [energy] efficiency projects’”(ECT, 1994).
Table 1  Core Concepts in Investment Agreements and Sample Investment Agreements

<table>
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<tr>
<th>Treaty</th>
<th>Energy Charter</th>
<th>NAFTA Draft</th>
<th>CAFTA</th>
<th>IISD Model</th>
<th>US BIT</th>
<th>Canada BIT</th>
<th>China BIT</th>
<th>India BIT</th>
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<td>Envtl Social Other?</td>
<td>Taxation measures Umbrella Clause</td>
<td>Information requirements</td>
<td>Information requirements; transparency</td>
<td>Information requirements; national authority, investor responsibility</td>
<td>Transparency</td>
<td>Monopolies and state enterprises; taxation measures</td>
<td>Compensation for losses</td>
</tr>
</tbody>
</table>

Notes: Shaded – indicates clause is included
Blank – indicates clause is not included
* – General standards of treatment include ‘fair & equitable treatment,’ ‘non-discrimination,’ ‘national treatment’ or ‘most favored nation status’ clauses
Some IIAs also stipulate that investments are subject to the approval of the host country, although this is often limited by clauses for “national treatment” or “most-favored nation status” (see below) (UNCTC/ICC, 1992). The potential implications of these coverage and scope provisions for efforts to increase investment in renewable energy are considered in Section 5.1 below.

3.4.2 General Standards of Treatment

The general standards of treatment in IIAs are typically based on the concepts of “fair and equitable treatment” and “nondiscrimination” that are a standard under customary international law (UNCTC/ICC, 1992). The general standards of treatment are frequently tied to provisions of “national treatment” and “most-favored nation status.” (UNCTAD, 2004a). “National treatment” requires that foreign investors be accorded no less favorable treatment than that accorded to investors from the host nation.

It is not uncommon for there to be exceptions from the “national treatment” standards for (Brewer, 1998):

- National security (usually an exception to all obligations – not just national treatment)
- Highly regulated industries
- Industries where there are monopolies or significant government ownership
- Industries that are central to the economy
- Other politically sensitive industries

There are differences in how these exceptions are noted across different IIAs. In some IIAs, there is a clear list of exceptions, while all other “investments” (and possibly “investors”) are granted “national treatment.” In other agreements, there is a list of industries and areas that are granted “national treatment,” with no a priori general right to “national treatment.” (UNCTAD, 2004a) In addition, in most IIAs “national treatment” is a standard that applies post-establishment – i.e. after an investor has obtained access to a market. However, recent U.S. and Canada BITs and NAFTA apply a pre-establishment standard, allowing foreign investors the same market access as domestic investors (UNCTAD, 2004a). The ASEAN Agreement for the Protection and Promotion of Investments is notable because it does not grant national treatment.

“Most-favored nation” status requires that the agreement signatory be accorded treatment no less favorable than it accords investors from other countries in “similar circumstances.” Because most agreements include both “national treatment” and “most-favored nation status,” this allows investors to use the more favorable of the two standards of treatment.

Because the energy sector is typically highly regulated, often with significant government ownership, and central to the economy, it is not unusual for IIAs specifically to exclude the energy sector. In these situations, a sector-specific
agreement, such as the ECT, can be used (see Section 3.2.1). These agreements may confuse an already complex investment market, but also may “facilitate the horizontal integration across policy areas; thus investment policy-trade policy and investment policy-technology policy linkages can be address on a sectoral basis.” (Brewer, 1998). The potential implications of these standards of treatment for renewable energy policies are discussed in Section 5.2 below.

3.4.3 Performance Requirements

Early BITs commonly included “performance requirements,” or standards or conditions that investors had to meet, often expressed as obligations to purchase local goods and services. These “performance requirements” were frequently combined with incentives that required a company to behave in a certain way, such as exporting a minimum amount of production or buying local goods (UNCTC/ICC 1992). Host countries would screen investors by using these “performance requirements” and incentives.

However, most recent IIAs include a “prohibition on performance requirements” and thereby limit a host country’s ability to restrict imports of foreign goods or services and do not allow host countries to require or prefer domestic goods or services. Some agreements with prohibitions on performance requirements, such as the Canadian Model BIT (2003), specifically allow measures that require investments to use a technology to meet generally applicable health, safety or environmental requirements (Canadian Model BIT Article 7, 2A).

3.4.4 Transfers of Funds and Currency

This IIA section describes the protocols for transferring funds. Transfers may occur because of income generated from invested capital, refunds, compensation, loan payments, proceeds from sales, and other sources. This clause is typically based on the principle that capital should move freely and without restrictions (UNCTC/ICC, 1992) by requiring that the transfers be allowed to be made in “freely usable currency” at “current rates of exchange.”

3.4.5 Expropriation

IIAs typically protect foreign investments from “takings” by host country governments without the payment of fair compensation (UNCTAD, 2004a). At the same time, such protections need be balanced against the government’s ability to protect its interests through regulation and the more general exercise of its police and taxing authorities. Finding this balance has proven to be one of the most contentious issues under IIAs.

In customary international law and IIAs, States have the legal right to “take” or “expropriate” foreign investments in their territories as long as three conditions are met: 1) the “expropriation” is for a “public purpose,” 2) it is done in a “non-discriminatory” manner; and 3) it includes “fair and equitable compensation.” (UNCTC/ICC, 1992; UNCTAD, 2004a). Some IIAs also have a fourth requirement that the “expropriation” be done with “due process” (UNCTAD, 2004a).
Of major concern are the types of government measures that will trigger the expropriation clauses in an IIA. There are a wide variety of definitions for expropriation across various investment agreements. Some agreements narrowly define expropriation as “direct takings,” such as “nationalization” (the state’s taking control of an economic sector or industry) or “expropriations” (the state assuming control of a business or property) by taking title to or physical possession of the property. Others have broader definitions of expropriation that include “indirect takings,” such as “regulatory takings,” or “creeping expropriation” where government actions such as taxation or regulation may diminish the value of an investment (Werksman, 2001). With indirect takings, government action results in “the effective loss of management, use or control, or a significant depreciation of the value, of the assets of a foreign investor.” (UNCTAD, 2004a).

There is no clear, consistent legal definition to determine what constitutes an “indirect taking” that requires investor compensation versus a legitimate exercise of the government’s right to regulate or tax that does not. For example, most host states retain the right to tax the investments (within reason) and to assess monetary penalties if there is a violation of a law without compensation to the investor. Some IIAs even define a government’s right to protect the environment as non-compensatory (UNCTAD, 2004a). In other instances though, “regulatory takings” have been determined to be compensatory (OECD, 2005a). This could be problematic if supply-side renewable energy promotion policies were to be seen as “taking” from traditional energy sources (see discussion in Section 5.3 below).

### 3.4.6 Dispute Resolution

IIAs would not be effective if there were not some mechanism to resolve disputes over their terms outside of the courts in the host country. Therefore, nearly all IIAs include provisions for dispute resolution (UNCTC/ICC, 1992). In general, only the investor can initiate the arbitration because IIAs are generally designed to protect investors. However, recent precedent discusses the right of the State to counterclaim where the IIA contains an umbrella clause (OECD, 2006). There are many different ways that dispute resolution might be addressed, such as diplomacy, court systems and binding arbitration. Some agreements establish institutions for dispute resolution, but most IIAs rely on binding arbitration under external organization such as ICSID or UNCITRAL Rules (ICSID, n.d.).

It is through the dispute resolution process that interpretations are made on conflicts that arise related to issues such as coverage and scope, discriminatory practices and expropriation. Because of differing substantive provisions in the various IIAs, and the lack of a permanent court to adjudicate all investment disputes, questions arise as to the consistency between both the resolutions of various disputes and of the choice of the law applied in individual disputes, particularly when there are conflicts between different laws (UNCTC/ICC, 1992). For example, while the ICSID Convention calls for the application of domestic law in certain circumstances, most IIAs rely on international law. Nonetheless, application of domestic law to certain issues (i.e., the nationality of the investor or the existence or certain rights)
may be inevitable. Several arbitration cases that may affect policies to promote investment in renewable energy are discussed in Section 5 below.

### 3.4.7 Environmental Clauses

It is only recently that IIAs have begun to address environmental issues (UNCTAD, 2004a). Environmental clauses have been included in some IIAs in an attempt to ensure that investment instruments do not impede a State’s “right to regulate” the environment, as well as to prevent the State from failing to enforce its environmental regulations in order to attract new investment. These clauses may also provide a framework for the transfer of “clean” technologies.

Environmental clauses are typically written in general terms, supporting the principles of environmental protection and sustainable development. One exception to this is the Model BIT proposed by the IISD (see above) (Mann et al., 2005). In response to the disputes over the environmental implications of NAFTA's investment chapter and the proposed Multilateral Agreement on Investment, the IISD has offered this model agreement containing extensive clauses covering both investor and host state rights and responsibilities. IISD’s purpose is to ensure that investment is consistent with sustainable development in addition to the goals normally pursued through IIAs (Mann et al., 2005).

### 3.4.8 Other Clauses

Other clauses address topics such as: agreements that governments will not interfere with the operation and management of the industry; an acknowledgement that the agreement covers not just the “investment” but also activities associated with the investment; and tax measures. Few of these have major implications for renewable energy policies, although the tax measures could have implications for taxes relating to the energy sector.

In addition, some IIAs, such as the ECT and the US-Argentina BIT contain an “umbrella clause” which is a broad statement that obligates the contracting State to honor its obligations to investors from the other contracting State. This has led some to argue that the clause allows an investor to seek arbitration under the IIA for breach of contract. Others have argued that an investor may only seek arbitration if an action of the government interferes with an investment when it is acting in a sovereign capacity. The broader reading of an umbrella clause would provide an energy investor additional protections for contracts with host States (Winter 2004).

### 3.5 Other International Activities Affecting Investment

Finally, in addition to formal investment agreements, there are a number of other initiatives underway at the international level to encourage more investment in developing countries, particularly in cleaner technology. Brief descriptions of some of the major activities are described below.
3.5.1 UNCTAD and Investment Promotion

The first UN Conference on Trade and Development (UNCTAD) was held in 1964. The purpose of the conference was to address the concerns of developing countries in the international trade area. At the conference, the members generally agreed that foreign direct investment should be encouraged between industrialized and developing countries (Fredriksson, 2003). Recommendations included the comment that countries should “take all appropriate steps to encourage the flow of private investments to developing countries, such as tax exemption or reductions, giving investment guarantees to private investors, and facilitating the training of managerial and technical staff.” (Fredriksson, 2003).

This positive view of FDI expressed in the 1960s began to change in the 1970s. At the third UNCTAD Conference in Santiago, Chile in 1972, discussions of FDI focused on the rights of states to regulate, and expressed concerns about possible negative effects of FDI. Concerns about FDI led the UN to prepare a report *Multinational Corporations in World Development*. Based on this report, the UN created the United Nations Centre on Transnational Corporations (UNCTC) in 1974. The UNCTC became active in 1975. The UNCTC was the focal point within the United Nations system for all matters related to transnational corporations (TNCs) and FDI. Meanwhile, UNCTAD continued to address issues related to investment, including aiding in the preparation of the Multilaterally Agreed Equitable Principles and Rules on Restrictive Business Practices, which was adopted by the General Assembly in 1980 (Fredriksson, 2003).

In 1992, the UNCTC was disbanded and the Programme on Transnational Corporations was transferred to the United Nations Department of Economic and Social Development. Then, in 1993, the program was transferred to UNCTAD, and is now being implemented by UNCTAD’s Division on Investment, Technology and Enterprise Development. Its focus is now on analyzing trends in foreign direct investment and its effect on development, along with helping countries promote international investment and understand the issues involved in IIAs (UNCTAD, 2002).

Some of these activities include the following:

- UNCTAD has been responsible for many publications on international investment flows, including the annual World Investment Reports, as well as numerous issue papers, including those examining key issues in IIAs.
- UNCTAD provides technical assistance to the WTO and developing countries on issues of investment. (UNCTAD, n.d.a)
- UNCTAD’s Global Investment Prospects Assessment (GIPA) assesses future patterns of FDI flows at the global, regional, national and industry levels. (UNCTAD, n.d.b)
- ICC and UNCTAD jointly prepare investment guides for developing countries. These country specific guides contain information on the investment environment in the individual countries, including investment opportuni-
ties, operating conditions, private-sector perceptions, and current foreign investors. (UNCTAD, n.d.c)

- UNCTAD’s program on Investment Policy Reviews helps countries improve investment promotion policies and institutions that deal with FDI. The intended result is an increase in the country’s ability to attract and benefit from FDI. (UNCTAD, n.d.d)

3.5.2 OECD, Investment, and Renewable Energy

“A core mission of the OECD is to enhance the contribution of international investment to growth and sustainable development worldwide, by advancing investment policy reform and international co-operation.” (OECD, n.d.c). This core mission of the OECD is primarily implemented by the Investment Committee, which has five main goals:

- Encouraging investment for development
- Preparing guidelines for international enterprises to encourage sustainable development
- Analyzing and explaining IIAs
- Preparing investment statistics and accompanying analysis
- Creating OECD investment instruments

The OECD member governments have both agreed to standards of conduct for themselves and recommended standards for multinational enterprises in two documents: the OECD Codes of Liberalisation; and the Declaration and Decisions on International Investment and Multinational Enterprises. The Code of Liberalisation of Capital Movements and the Code of Liberalisation of Current Invisible Operation are legally binding rules for OECD member states that require progressive, non-discriminatory liberalization of capital movements, the right of establishment, and financial services and other current invisible transactions (OECD, n.d.d). The Declaration and Decisions on International Investment and Multinational Enterprises is a political agreement for cooperation on a wide range of investment issues. It includes the National Treatment instrument, the Guidelines for Multinational Enterprises, an instrument on incentives and disincentives to international investment, and an instrument on conflicting requirements. All 30 OECD member countries, and eight non-member countries have subscribed to the Declaration (OECD, n.d.d).

In addition to these legal instruments, the OECD countries participating in the Arrangement on Officially Supported Export Credits have agreed to special financing terms for renewable energy projects. The special financing terms began on July 1, 2005 and will continue on a trial basis for two years. Under the special terms, financing can be extended for 15 years for renewable energy projects (OECD, n.d.b).
3.5.3 “Post-Kyoto” Discussions

United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol provide much of the framework for international climate change efforts. The Kyoto Protocol entered into force on February 16, 2005. The target period for the Kyoto Protocol is 2008 to 2012. However, this is only a first step in meeting the goals of the Climate Change Convention. The United Nations Conference on Climate Change (UNCCC), held in Montreal in November 28 through December 9, 2005, established a working group to address post-2012 commitments for developed countries. The working group convened in May 2006 and November 2006. The Chair summary of the first in-session workshop of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol in November 2006 stated that “the carbon market still has tremendous potential, but the Kyoto mechanisms require continuity after the first commitment period to continue their expansion. And the demand for credits generated through the mechanisms is expected to increase in future commitment periods to sustain the market value of carbon.”(UNCCC, 2006a). The Further Commitments for Annex I Parties and Programme of work Draft conclusions noted that “further sessions will be scheduled with a view to completing the work of the AWG as early as possible and in time to ensure that there is no gap between the first and the second commitment periods under the Kyoto Protocol.” (UNCCC, 2006b).

Although serious negotiations have not begun on post-2012 climate policy commitments (Torvanger, et al., 2005), there are many ongoing discussions about options for addressing climate change beyond 2012 (Bodansky et al., 2004). The outcomes of these discussions could have significant effects on renewable energy policy and investment in renewable energy. A few examples of the on-going discussions are as follows:

G8

Climate change issues were also discussed at the 2005 G8 Summit. The Group of Eight (G8) consists of Canada, France, Germany, Italy, Japan, the United Kingdom (UK), the United States of America, and the Russian Federation. Among other resolutions, the G8 agreed to have a continuing “Dialogue on Climate Change, Clean Energy and Sustainable Development.” The UK agreed to host the on-going dialogue in 2005. A report on the dialogue is planned for the G8 summit scheduled for 2008 (G8, 2005a). However, the G8 also agreed that the UNFCCC is the appropriate forum for negotiating future action on climate change. The G8 Climate Change Roundtable also issued a statement to the World Economic Forum that the current regulatory scheme, including the Kyoto Protocol targets that do not extend past 2012, can be problematic for potential long-term investors, particularly for investors in power projects, (which can have a 25-50 year lifecycle), or for investors in tradable emissions credits and low carbon projects in developing countries. The statement urged global policies that “[e]stablish a long term, market-based policy framework extending to 2030 that will
give investors in climate change mitigation confidence in the long term value of their investments . . . [e]stablishing indicative signals extending to 2050 would also be beneficial.” (G8, 2005b).

As part of the G8 discussions, the World Bank is leading a discussion on an “Investment Framework” for climate change. The World Bank is working with multilateral banks, export credit agencies, private sector financiers, and re-insurers “to generate a long-term investment framework for low carbon economic growth, specifically, for finance for energy efficiency, clean energy, and adaptation to climate change and variability.” (World Bank, 2006).

*The Clean Energy Group*

The Clean Energy Group13 prepared a white paper for the Montreal Strategic Climate Change Workshop for Sub-National Strategies for Clean Energy Investment, Technology Deployment and Innovation. The white paper emphasized the need for long term incentives for innovation and concluded that “[t]o move beyond Kyoto requires new market, technology and finance solutions that are firmly rooted in an economic development approach.” (Milford, 2005). The Clean Energy Group is also working with the UK’s Carbon Trust on a trans-Atlantic dialogue to increase investment in clean energy.

The Clean Energy group also formed the Clean Energy Investment Working Group. Established by institutional investors, it provides a forum to examine opportunities and strategies for investment in clean energy and climate technologies. The working group is managed as a collaboration between Ceres’ Investor Network on Climate Risk and the Clean Energy Group. Participants have been “exploring ways to reduce the environmental and associated financial risks to their portfolios and to enhance long-term investment returns by looking beyond the important current conversations about climate risk to consider the possibilities of making prudent investments in appropriate clean energy and climate change-related technologies.” (Clean Energy Investment Working Group, n.d.).

*Pew Center on Global Climate Change*

The Pew Center on Global Climate Change14 has convened a series of discussions on what a post-2012 framework might look like. Participants from 15 countries met on four separate occasions from 2004 through 2005 and published a report of their dialogue in November 2005. The report described several possible approaches to the post-2012 negotiations. One of these outlined ways to increase investments with positive impacts on climate, while decreasing those with negative impacts (Pew, 2005). The report also noted that emissions targets and international emissions trading should be a key aspect of the on-going international effort, although these targets could take many forms. The report also discussed the possibility of various forms of commitments for key sectors (including energy), and technology cooperation to facilitate the deployment of clean technologies.

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13 The Clean Energy group is an NGO that promotes renewable energy programs and policies. Among other activities, it manages the Clean Energy States Alliance and Public Fuel Cell Alliance. More information can be found at www.cleangroup.org.

14 The Pew Center on Global Climate Change is an NGO that works to provide a forum for objective research and analysis and for the development of pragmatic policies and solutions to global climate change. More information can be found at www.pewclimate.org.
**Renewable Energy and Energy Efficiency Partnership**

The Renewable Energy and Energy Efficiency Partnership (REEEP) facilitated the Sustainable Energy Asia Forum in 2005. The purpose of the forum was to bring together policy makers, energy investors, project developers, and others involved in energy management. The forum discussed numerous issues including impact of Kyoto Protocol, privatization of energy utilities, and renewable energy. REEEP also chaired a session whose presentations focused on clean development mechanism (CDM), carbon trading in Asia, and the need for innovative approaches to finance. In addition, REEEP has created REEGLE – the Information Gateway for Renewable Energy and Energy Efficiency – which is designed to be ‘a one-stop shop for high quality information on renewable energy and energy efficiency.’

### 4.0 INTRODUCTION TO THE RENEWABLE ENERGY INVESTMENT MARKET

In order to understand the barriers to and opportunities for increased investment in renewable energy that are created by International Investment Agreements, a basic understanding of the investment market for renewable energy is necessary. This section provides such an overview. It describes briefly the:

- Main types of investments and investors in renewable energy projects
- Projections for future investments in renewable energy
- Major barriers to investments in renewable energy
- Main types of policies being adopted by national governments in an effort to increase investment in renewable energy

This section only offers an introduction to this complex field. Many more detailed reports have been written on these subjects and the market is changing rapidly. As such, the purpose of this section is only to familiarize the reader with the basic concepts before proceeding to an analysis of the links between IIAs and renewable energy investments in Section 5.

#### 4.1 Investments in Renewable Energy Projects: An Overview

The renewable energy life cycle can be divided broadly into three main stages: (1) technology research and development (R&D); (2) system and product development; (3) and market/project development. Each stage in this process currently involves investment by both the public and private sectors. These investments take different forms depending upon a wide variety of global and local factors.

This chapter focuses on the last stage in this cycle – the expansion of markets to support investments in renewable energy projects as these are the investments most obviously affected by IIAs. As such, it starts with an overview of renewable energy projects, including a summary of the project development cycle and examples of “typical” deal structures.
One important distinction among renewable energy projects is on-grid versus off-grid projects, which describes how the produced electricity is delivered to users. On-grid projects are projects that feed into a larger electricity system or “grid.” A grid is typically defined as an integrated transmission and distribution system serving many customers (US DOE, 2005). A grid can be national, regional or local, but is controlled by a centralized authority. Off-grid projects are individual energy installations that are not connected to a larger electricity grid, such as a roof-top solar system providing power directly to the building on which it is located. On-grid and off-grid projects require different amounts of investment, often involve different types of investors, and typically have different financing structures. They also have differing risks, benefits, and barriers to investment. Some of the major differences are described below.

A renewable energy project evolves from concept to reality in several stages, usually grouped into phases: project planning; implementation; and operation. While the details and specifics vary from project to project, the following is an overview of the typical process.

The project planning stage, when most investment decisions are made, is devoted to due diligence to assess the financial and physical feasibility of the project. Many of these tasks occur simultaneously. In this stage, a developer creates a project proposal by conducting a basic technological feasibility assessment, assessing the market, developing cost estimates for project development, and constructing a financial model to estimate the expected rate of return. It often takes several years and requires considerable funding to evaluate a project’s feasibility, apply for permits, and conduct environmental assessments. Such resources may be attained from a variety of sources including, development company budgets, private finance, venture capitalists, private equity funds or government grants (Sonntag-O’Brien and Usher, 2004a).

One of the most important steps in this stage is also one of the most important for the entire project – securing a power purchase agreement (PPA) if one is available. A PPA is a contractual commitment from a power off-taker to purchase the electricity produced by the proposed facility. A PPA is important to the financing, and therefore the implementation of the renewable energy project, because it creates a longer-term, predictable revenue stream.
In some circumstances, however, independently operated renewable energy facilities are “merchant plants.” These merchant plants feed power into a “power pool” and are financed without a PPA. Merchant plants are not guaranteed that anyone will buy their power at any particular time, volume or price and must respond to market needs. Therefore, merchant plants try to fill specific, continuing niches in the market, such as providing power for “baseload” operation; to regional power pools: at times of peak demand; or to a single user (EPSA, n.d.a). Financing merchant plants is often more difficult given the absence of a PPA and therefore a less predictable revenue stream over time.

In addition to understanding who is going to buy the power, the developer must also consider other risks such as licenses and permits, land ownership, rights-of-way, interconnection and transmission, contractors and suppliers, technological risks, and environmental risks. Each of these issues presents its own unique challenges and requires extensive time and money for due diligence as the developer attempts to understand the project’s profitability and risks. Financial institutions must be approached early in the project development process in order to determine investor interest and estimate financing costs. However, financing commitments, especially loan agreements, are typically final only after all significant engineering, contracting, and permitting requirements are met (Wiser and Pickle, 1997).

While the financing of renewable energy projects is similar to that of large-scale conventional power projects, it is not the same. Renewable energy, although subject to the same broad market forces as conventional power, involves markedly different technologies and thus their financing requires new thinking, new risk management approaches and new forms of capital (O’Brien and Usher, 2004). As O’Brien and Usher point out, for renewable energy, “the finance continuum . . . is generally incomplete and the gaps can often only be filled with niche financial products, some of which exist and some of which need to be created.” (O’Brien and Usher, 2004).

Managing the actual and perceived risks associated with renewable energy technologies is a crucial element in financing renewable energy projects. Differences between renewable and conventional energy projects, such as in scale, dependency on government incentives and subsidies, fuel sources, and technology have created a need for investors to utilize a variety of financial instruments to transfer risk between developers, lenders, insurers (Petricone, 2006). Due to different financing needs and risks, financing instruments and deal structures vary considerably between on-grid and off-grid projects.

**Typical On-Grid Financing**

Once a project is deemed feasible, project developers seek to locate external equity and debt financing. External equity may be provided by project developers and as well as by external investors. For large, on-grid projects, a substantial portion of equity investment (typically 20 to 30 percent of the total financing or more) is required in order to secure the additional debt finance necessary.

Projects may use two different types of debt financing: corporate and project finance. Corporate finance is borrowing directly by a company based on the strength
of its balance sheet and its track record. It is the preferred approach to debt for small projects (<$15 million), because it has lower transaction costs than project financing (Sonntag-O’Brien and Usher, 2004b).

However, project financing is the most frequent means of financing large, capital-intensive renewable energy projects. Project finance structures use anticipated project revenues as the primary basis for credit analysis and source of loan repayment, instead of simply lending based on the credit standing of the developers. This structure allows different risks to be distributed to the parties best able to manage them across all of the entities involved in project development, a critical aspect of risk management (Buljevich and Park, 1999). Project financing agreements often include requirements for long term PPAs, guarantees for project completion and performance, and the lender’s right to take over operation of the project in the event of default.

A variety of related structures have also been developed to address gaps that sometimes exist between equity and debt financing. For example, “mezzanine finance” “groups together a variety of structures positioned in the financing package somewhere between the high risk/ high upside equity position and the lower/risk fixed returns debt position.” (Sonntag-O’Brien and Usher, Eric. 2004a).

**Figure 3 On-Grid Finance**

Source: Sonntag-O’Brien and Usher, 2004a

**Typical Off-Grid Financing**

Off-grid financing projects are generally smaller than on-grid projects and require less capital. However, these projects still require financing at a variety of stages. This
is particularly true given that many off-grid project developers are smaller entrepreneurs (Sonntag-O’Brien and Usher, 2004a). Project developers often need start-up or seed money due to the upfront costs of establishing decentralized infrastructure and relatively high transaction costs. Commercial lenders are rarely interested in financing small to medium off-grid projects because of high levels of perceived project risk (Usher, 2003). Hence, financing is often obtained from private equity investors or donors. Several types of financing structures also help manage the risks associated with investments in off-grid projects. However, financing gaps remain a major issue for off-grid projects, especially in developing countries (Usher, 2003).

Figure 4  Off-Grid Finance

A wide range of both public and private investors are providing debt, equity, grants, insurance and other financing support for renewable energy projects. Some of the major types of investors in renewable energy include:

- Development Banks, such as the World Bank, International Finance Corporation, European Bank for Reconstruction and Development, Asian Development Bank, Inter-American Development Banks and others
- Donor Agencies, both multilateral (such as the Global Environmental Facility [GEF] and the United Nations Environment Programme [UNEP]) and bilateral (such as the UK development agency DFID)

Note: For example, see UNFCCC. 2005. Secretariat Report on Sources of Investment for Climate Mitigation and Adaptation Activities in Developing Countries. Presented to the 1st Conference of the Parties/Meeting of the Parties in Montreal, Quebec, November.
Commercial and Investment Banks, such as Goldman Sachs, Citigroup, ABN Amro, Fortis Bank, and others

Private equity/Venture funds, such as Renewable Ventures LLC, Private Energy Market Fund, The Carlyle Group, Technology Partners, NexGen Power LLC, Blue Moon Fund, and others

Insurers, such as Swiss Re and others

Multinational developers/equipment suppliers, such as GE, ABB, BP Solar, Sharp, Shell, and others

International Foundations/NGOs, such as the Rockefeller Brothers Fund, Winrock International, the New Ventures program of the World Resources Institute, and others

Private investments in renewable energy are driven by the same profit motive that drives any private investment – once the expected return on the project has been determined, the lender/investor will determine whether the project meets its internal hurdle rate requirements. However, renewable energy investment is also affected by other considerations. Issues such as the negative environmental and health impacts associated with conventional energy sources, the increasing prices of conventional fuels and concerns over energy security also drive governments’ interests in supporting policies that encourage investments in renewable energy (see discussion below). Similarly, the goal of NGOs investing in off-grid projects is to capture the “social return” of providing cleaner power to underserved areas, not to receive a purely financial return on the investment.

4.2 Global Trends in Investment in Renewable Energy

So, what is the result of this variety of efforts to invest in renewable energy? Renewable energy remains a small percentage of total energy production, but is growing rapidly – as shown in the following figure.

Figure 5 Annual Investment in Renewable Energy 1995-2005

In a review of International Energy Agency (IEA) member countries, the IEA noted that in the past 30 years the percentage of renewable energy in the total primary energy supply has been increasing. However, the most rapid growth occurred between 1970 and 1990, with the growth rate slowing after 1990. In particular, production from well-developed renewable energy technologies such as hydro and geothermal declined in the 1990s. However, newer technologies such as wind and solar projects continue to experience significant growth. Because they are such a small percentage of the total electricity produced, however, the percentage of renewable technology fueling total electricity production has fallen since 1970. Even so, solar and wind markets expanded by an average of almost 18 percent per year over the period from 1970 to 2001 (OECD/IEA, 2004).

Global trends in the use of renewable energy are heavily influenced by government policies. The OECD/IEA World Energy Outlook for 2003 evaluated possible future investment needs for renewable electricity generation capacity. As part of the evaluation, they considered a ‘reference scenario’ that analyzed policies that were in place before mid-2002. In addition, they analyzed an ‘alternative policy scenario’ that evaluated the potential effect on energy markets if existing policies to reduce CO₂ emissions and electricity consumption were strengthened. Under the alternative policy scenario renewables are anticipated to make up 25 percent of total electricity generated by 2030, compared to 17 percent in the reference scenario (OECD/IEA, 2003).

**Figure 6 OECD Share of Renewables in Electricity Generation in the Reference and Alternative Policy Scenarios**

![Chart showing OECD Share of Renewables in Electricity Generation](Source: IEA, 2003)

In the reference scenario, the OECD/IEA estimates that US$477 billion will be invested in renewable electricity generation between 2000 and 2030; under the alternative policy scenario the estimate increases to a US$724 billion (IEA, 2003). The report noted that “to achieve investment in renewables at the level expected in the Alternative Policy Scenario, OECD governments will have to develop vigorous incentive strategies.” (IEA, 2003).
In the developing world, The World Bank has estimated that between US$140 and 160 billion of investment per year is needed to finance the power sector between 2002 and 2020 (Deloitte 2004). However, recent years have shown a reduction in the willingness on the part of donors and investors to support large infrastructure development projects, such as for energy, in developing countries (Kabbaj, 2004; Le Soleil, 2004). The peak of private investment in the energy sector was about 45 billion US dollars in 1998, and by 2002 had dropped to about 35 billion US dollars (Deloitte, 2004).

The Global Environment Facility (GEF) has estimated that as the demand for cleaner energy increases and the costs of providing it decreases (with technological advances), “these trends set the stage in coming years for a significant deployment of investment capital into the development and finance of projects that deliver reliable, efficient and cleaner forms of energy.” (Clean Edge, 2004). These projections are echoed in the projected growth of clean energy by the Clean Edge consulting group.

![Figure 7: Clean Energy Projected Growth 2005–2015 ($US Billions)](source: Makower, et al., 2006)

4.3 Major Barriers to Investment in Renewable Energy

What barriers are standing in the way of even more investment going into renewable energy? Specific answers to this question vary dramatically across technologies, locations, investors and a host of other factors. At the same time, many studies of such barriers have been done and there appears to be a common set of major barriers that are shared across many of these factors. The following chart is an effort to summarize some of the major barriers to investment in renewable energy that have been identified in several of these studies. The chart does not include more general barriers that also apply to non-renewable projects, such as economic instability or government corruption. Nor does it attempt to identify how any of these or other barriers play out in particular countries. Rather it focuses on the most critical barriers identified as facing investments in renewable energy in both developed and developing countries. Its purpose is to enable a comparison to be done...
between these major barriers and the provisions of IIAs and other international investment initiatives in order to identify opportunities where those initiatives might help overcome these barriers.

Table 2 Summary Listing of Major Barriers to Investment in Renewable Energy

<table>
<thead>
<tr>
<th>Market Barriers</th>
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<tbody>
<tr>
<td>Inertia of the existing electricity system</td>
<td>Renewable energy a threat to traditional utility dominance/profit; infrastructure created around conventional energy system; conventional energy has established customers/demand</td>
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<tr>
<td>Lack of information on renewable energy options</td>
<td>Lack of transparency; need to determine resource availability; information on availability often not available; potential customers know less about renewable energy options; need for public education</td>
</tr>
<tr>
<td>High transaction costs</td>
<td>Relatively higher transaction costs on a per-kilowatt (kW) capacity basis compared with conventional energy plants; increased market barriers within countries; under-developed R&amp;D; fewer skilled personnel; minimal funds for lobbying organizations</td>
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<tr>
<td>Limited access to/development of technology</td>
<td>Lack of technology transfer; policies or taxes limiting technology imports; need for further R&amp;D in developed and developing countries; limited warranties to support technology</td>
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<tr>
<td>Inadequate infrastructure</td>
<td>Under-developed supply chains; integration issues connecting renewable technology to energy grid system due to intermittency and distributed generation; capacity limitation in infrastructure; safety concerns about integration</td>
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<tr>
<td>Negative externalities of traditional energy not considered in price</td>
<td>Costs of pollution, GHG emissions, etc. from traditional energy sources not considered in price of conventional energy; conventional power project risks often underestimated</td>
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<tr>
<td>Siting, permitting and construction hurdles</td>
<td>Need time and money to acquire adequate information on relevant natural resource availability (solar, wind etc.); lack of established procedures on siting and permitting; specific environmental concerns (ex. wind power and migratory bird paths); “Not in My Back Yard” issues</td>
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<tr>
<td>Evolving technology</td>
<td>Risk of new technologies; costs of development; concern about premature technological obsolescence in term of financing; lack of track record needed by project financiers; different perceptions of R&amp;D risk between entrepreneurs and project financiers</td>
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<tr>
<td>Intermittent energy availability</td>
<td>Technologies dependant on natural resource availability (sun, wind, etc.); potentially higher resource-availability risk; intermittent energy sources a challenge for utility interconnections</td>
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<tr>
<td>Unfavorable power pricing rules</td>
<td>Limited infrastructure for distributed generation; lower prices given to intermittent renewable sources; difficulty transmitting energy due to some renewable sources distance from population centers</td>
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<tr>
<td>Lack of access to credit</td>
<td>In rural areas of developing countries microcredit lending for household, small renewable energy systems may not be accessible; loans may not be long term enough for renewable system long term return on investment</td>
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<tr>
<td><strong>Government Regulation</strong></td>
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<td>---------------------------------------------------------------</td>
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<tr>
<td><strong>Government monopolies</strong></td>
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<td>Entry into market often restricted by regulation; independent</td>
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<tr>
<td>power producers often unable to sell electricity to utility or</td>
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<td>directly to users; in some areas new uncertainties with electricity</td>
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<td>restructuring</td>
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<tr>
<td><strong>Uncertainty in government incentives/policies</strong></td>
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<tr>
<td>Profits often dependent on regulation; “boom bust” pattern with</td>
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<td>changing regulations; lack of investor confidence in long-term</td>
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<tr>
<td>value of renewables market</td>
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<tr>
<td><strong>Utility interconnection requirements</strong></td>
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<td>Lack of uniform utility interconnection requirements may</td>
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<tr>
<td>increase transaction costs; utilities may create burdensome</td>
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<tr>
<td>(especially for small power producers) interconnection</td>
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<td>requirements due to safety and quality concerns; additional</td>
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<td>charges due to intermittent energy generation; charge for</td>
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<td>difficulty scheduling energy inputs</td>
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<td><strong>Conventional energy subsidies</strong></td>
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<td>Public subsides that benefit conventional energy and put</td>
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<tr>
<td>renewable energy to a greater disadvantage include: direct</td>
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<tr>
<td>budgetary transfers, tax incentives, R&amp;D contributions, liability</td>
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<tr>
<td>insurance, leases, land right of way, and guarantees to mitigate</td>
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<tr>
<td>project financing/fuel price risks; minimal penalties for more</td>
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<td>polluting fuel uses</td>
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<tr>
<th><strong>Capital Risks</strong></th>
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<tr>
<td><strong>Higher initial capital costs</strong></td>
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<td>Renewables often need more up-front financing for the</td>
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<td>equivalent kilowatt hour; as a result, lending rates often</td>
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<td>higher; lack of seed capital limits off-grid projects</td>
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<tr>
<td><strong>Financing gaps</strong></td>
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<tr>
<td>Lack of support by local banks for off-grid projects; debt/equity</td>
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<tr>
<td>gaps</td>
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<tr>
<td><strong>High perception of risk</strong></td>
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<tr>
<td>Reduced availability of funds for project financing; higher</td>
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<tr>
<td>discount rates; most lending institution/project financiers</td>
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<tr>
<td>averse to investments in higher risk technologies; difficulty</td>
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<tr>
<td>securing a long-term PPA; lack of consideration of future</td>
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<tr>
<td>fossil fuel price risks; lack of actuarial data to assess</td>
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<tr>
<td>risks</td>
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<tr>
<td><strong>Insurance gaps</strong></td>
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<tr>
<td>Difficult to diversify risks, project risks often less</td>
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<tr>
<td>insurable because they are less established; underwriters have</td>
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<tr>
<td>fewer strategies to deal with risk</td>
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<tr>
<td><strong>Preference to short payback periods</strong></td>
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<tr>
<td>Initial investments high and long term investments needed to</td>
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<tr>
<td>benefit from long term lower fuel and operating costs</td>
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</table>

### 4.4 Policies to Promote Investments in Renewable Energy

In order to address such barriers, governments have developed a number of policies to promote investment in renewable energy (IEA, 2004). This section summarizes some of the major policy tools governments are using to address energy supply, capacity, generation and demand. Again, it must be noted that this is just a summary – much more detailed descriptions of national and sub-national policies to promote investments in renewable energy are provided in other reports.\(^{22}\)

Government policies have important implications for the market for investment in renewable energy. For example, Ernst & Young publishes regular “Renewable Energy Country Attractiveness Indices.”\(^{23}\) While the indices consider factors such as wind speed and days of sunshine, most of their data covers governance related items such as:

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\(^{22}\) In particular, the IEA Renewable Energy Market & Policy and Trends provides a thorough description of market deployment policies (IEA, 2004).

\(^{23}\) See [http://www.ey.com/global/content.nsf/UK/ECU_
| -library#2](http://www.ey.com/global/content.nsf/UK/ECU_-_library#2)
Electricity market regulatory risk;
Planning and grid connection issues;
Access to finance;
Power off-take attractiveness;
Tax climate;
Grant/soft loan availability; and
Market growth potential (based on policy targets).

While many different groups are now encouraging governments to adopt policies designed to spur investment in renewable energy, the approaches they recommend tend to fall into a relatively small number of major categories concerning government regulation, taxation, spending and information programs. A few examples are provided below.

As shown in Figures 3 and 4 above, Sonntag-O’Brien and Usher identify a number of gaps in and barriers to the financing of on- and off-grid projects (Sonntag-O’Brien and Usher, 2004a). They then go on to propose a number of policy interventions to address those issues, including those involving government:

- Spending (grants, public-private financing partnerships)
- Taxation (deductions/credits)
- Information (education/capacity building)
- Regulation (access rights to the grid)

A broader review of national policy instruments being used to expand markets for renewable energy was published by the IEA in 2004 (IEA, 2004). While the IEA structured its analysis around the market segments described in Figure 8, the basic categories of policy tools considered remained the same. Summary descriptions of these main policy tools are provided below.
4.5.1 Policies Addressing Supply and Generation

Policies used to address supply and generation include incentive tariffs, tax measures, regulatory requirements, and tradable certificates.

**Incentive Tariffs**

Incentive tariffs are set at rates above market rates, often referred to as “guaranteed price systems” or “feed-in tariffs.” These incentive tariffs are a government established price per unit of electricity that a utility must pay for a unit of electricity from a private generator. The government, not the market sets the price. The first guaranteed price system was enacted in the United States in 1978 – the Public Utility Regulatory Policies Act (PURPA) (IEA, 2004). Its purpose was to encourage development of new sources of electricity and encourage energy efficiency. One of the ways it did this was to require utilities to buy a percentage of their power from independent power producers operating “qualifying facilities” (QFs). The power had to be purchased at the utility’s “avoided cost,” i.e. the cost the utility would have incurred to generate that same amount of energy. In addition, PURPA required the utilities to connect with the QFs, contract with them at reasonable terms and conditions, and provide back up power to them (EPSA, n.d.b). PURPA is credited with adding 12,000 megawatts of non-hydro renewable energy capacity to the US system (UCS, 2002). Germany, Italy, and Spain also have “avoided cost” based incentive tariffs. This policy and other renewable energy promotion policies are credited with encouraging the development of 12,000 megawatts of wind energy capacity in Germany and 4,830 megawatts in Spain (IEA, 2004).
A bidding system is a variant of an incentive tariff. Bids are submitted to produce renewable power at above market rates. The lowest bidder is awarded a PPA. Utilities are required to purchase the power at the market rate, with the government agreeing to pay any above market costs (Wiser, 2002). Bidding systems are used in the UK’s Non Fossil Fuel Obligation and Ireland’s Alternative Energy Requirement (IEA, 2004).

**Tax Measures**

Tax measures can also be used to encourage investment in renewable energy generation. However, in order to be successful, the tax incentives must be sufficient to cover the higher cost of renewable energy generation compared to traditional generation methods. For example, the US production tax credit has encouraged investment in domestic wind generation, but not other forms of renewable energy generation (Wiser, 2002). The time period the tax measure is in effect can also affect its results. For example, although the US production tax credit has encouraged development of wind generation projects, the on and off nature of the policy since 1999 has led to a “boom and bust” cycle of wind generation project development (Wiser, 2002).

**Regulatory Requirements**

Examples of regulatory requirements include renewable portfolio standards (RPS) and obligation systems. RPSs require electricity providers to obtain a percentage of their power from a range of renewable sources. Because the market determines which renewable energy technology is chosen, RPSs are seen as encouraging the development of renewable energy generation systems at the lowest cost (Wiser, 2002). Often central to RPSs are Tradable Renewable Energy Certificates (TRECs, discussed below). TRECs are certificates evidencing the fact that a given amount of power has been produced from renewable sources. TRECs are a separate commodity from the power itself (AWEA, 1997).

Obligation systems, like those used in the European Union and Australia, set requirements for individual renewable energy technologies. In order for obligation systems to be effective, penalties for non-compliance must be higher than the cost of compliance. In addition, effective obligation systems should take into account resource availability, and should be in effect for a long enough period of time that investors can be confident they will recoup the cost of the investment (IEA, 2004).

** Tradable Certificates**

As noted above, a TREC is a commodity that provides evidence that electricity has been produced from renewable sources. The certificates can be sold in voluntary green power markets or used to prove compliance with a regulatory obligation such as an RPS. Unlike other methods, TRECs by themselves do not encourage investment in renewable energy generation. Instead, they provide a useful mechanism for market flexibility as they aid in the implementation of other policy instruments such as RPSs (IEA, 2004).
There are many different TREC systems. The IEA has noted that several issues need to be addressed before TRECcs can be used on a larger scale (IEA, 2004). For example, administrative costs must not be prohibitive, different TREC systems need to be compatible, and the relationship between TRECcs and carbon certificates needs to be clarified. The REEEP has noted that in order to facilitate trade, TREC systems should have common definitions of eligible renewable energy sources and technologies, as well as standards for verification. (REEEP, n.d.)

4.5.2 Policies Addressing Supply and Capacity

Investment incentive policies that address supply and capacity issues include capital grants, concessionary finance, tax measures, and government purchases.

Capital grants and third-policy finance incentives encourage investment by using public funds to reduce the cost or risk of private investment in renewable energy. For example, capital grants are seen as a driving force behind the success of Japan’s rapid photovoltaic (PV) deployment (IEA, 2004). Concessionary, where the government provides low interest loans or assumes specified risks, is credited with the rapid growth of wind generation capacity in Spain (IEA, 2004).

Finally, government purchases can also provide incentives for investment. For example, the US General Services Administration Region 2 purchases 33 percent of its power from biogas and wind sources (US EPA, 2006). In addition, governments have purchased on-site renewable systems, such as solar hot water systems, for public buildings (IEA, 2004).

4.5.3 Policies Addressing Demand and Generation

Policies addressing generation and demand include voluntary measures and tax measures.

Voluntary programs include green pricing and net metering. With green pricing options, customers can choose to pay an additional fee to support renewable energy generation or purchases by their regular electricity provider (US DOE, 2006). Net metering policies allow electricity customers that produce their own energy from renewable sources to “bank” excess production so that the customer-generator only pays for the net electricity actually used over the course of a billing cycle (AWEA, 1998). In addition, there are several examples of a government requesting utilities to purchase a portion of their capacity from renewable sources and for the utilities to comply voluntarily. For example, Japan developed a voluntary plan in 1992 that is in large part credited with the expansion of their solar and wind capabilities (IEA, 2004).

Tax measures such as a biodiesel tax exemption have been used to encourage production of biofuels. Carbon taxes can make traditional energy sources less attractive by raising prices, thereby making energy from renewable sources more cost competitive (IEA, 2004).

24 For example the Nebraska Ethanol and Biodiesel tax exemption and the Illinois biodiesel tax incentive.
4.5.4 Policies Addressing Demand and Capacity

Policies addressing demand and capacity include investment incentives and tax measures.

Investment incentives include consumer grants and third party finance. Consumer grants lower the capital cost of installing on-site, distributed renewable energy capacity. For third party finance, governments assume a portion of the risk using methods like the provision of low interest loans (IEA, 2004). Tax credits, system rebates, and sales tax rebates can also be used to help customer-owned renewable energy systems recoup their capital costs (IEA, 2004).

4.5.5 Key Categories of Policies To Expand the Use of Renewable Energy

For purposes of the analysis in the following section of this chapter, the policy tools being used by national governments to encourage investments in renewable energy can be summarized as falling into the following four categories:

- Government regulation – monopoly (access, pricing, sourcing), environmental (internalizing externalized costs and benefits)
- Government taxation – reductions (credits/deductions), increases (carbon taxes)
- Government spending – grants, concessional finance, public-private partnerships, procurement
- Government information – educational programs, disclosure requirements

Using these four categories, the potential impact of the core concepts in IIAs on national government efforts to promote investment in renewable energy will now be considered.

5.0 Analysis of the Links Between International Investment Law and Efforts to Expand Investment in Renewable Energy

Having identified the core concepts in International Investment Agreements in Section 3, as well as the major barriers to such investments and the key policy tools being used by governments to help overcome those barriers in Section 4, the purpose of this Section 5 is to examine the links among those different factors. Section 5.1 looks at the potential barriers created by IIA core concepts to national governments’ abilities to use the key policy tools. Section 5.2 considers the potential opportunities offered by IIAs to help overcome the major barriers to investment in renewable energy. Finally, Section 6 below offers some conclusions and suggestions for further work at the international level to encourage investment in renewable energy.
5.1 Potential Barriers in International Investment Law to National Policies Promoting Investments in Renewable Energy

International Investment Agreements are expressly designed to help promote foreign investment, including in renewable energy. As such, one would not expect to find that they create many barriers to efforts to expand such investment. A number of questions have been raised, however, about whether the core concepts in IIAs may unintentionally restrict the ability of host country governments to adopt policies promoting investment in renewable energy – as opposed to other sources of the energy. In addition, concerns have also been raised that the protections in IIAs may not extend to the full range of “investments” associated with renewable energy. All of these issues are examined below.

A useful starting point for this analysis is shown in Table 3 below, which identifies the areas in which the core concepts of IIAs may pose issues for the key policy tools being used to promote renewables:

Table 3 Key Policies to Promote Investment in Renewable Energy and Interactions with Core Investment Agreement Concepts

<table>
<thead>
<tr>
<th>Policy</th>
<th>Core Concepts</th>
<th>Coverage &amp; Scope</th>
<th>Treatment Standards</th>
<th>Performance Reqs.</th>
<th>Fund Transfers</th>
<th>Expropriation</th>
<th>Dispute Resolution</th>
<th>Environmental</th>
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<tbody>
<tr>
<td><strong>Regulation</strong></td>
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<td>Bidding Systems</td>
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<td>Guaranteed Prices/feed-in tariffs</td>
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<td>RPSs/Obligations</td>
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<td>Net metering</td>
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<td>Excise tax exemption</td>
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<td>Property tax exemptions</td>
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Note: shading indicates key policies that have a potential interaction with IIA core concepts.
As shown in the chart, possible the areas of conflict include coverage and scope, treatment standards and expropriation. Each of these areas are discussed below.

### 5.1.1 Coverage and Scope

Questions of coverage can be more complicated than might first be thought. For example, what precisely constitutes an “investment?”

The notion of investment is one of the most controversial in law and in economic science. It has been variously described as ‘untraceable,’ ‘inexistent,’ ‘nebulous’ and ‘used in law without an established definition.’(Hamida, 2005).

While there seems to be little doubt that investments made in legally recognized property or contractual rights are covered by IIAs, questions have been raised about the status of so-called “hybrid property” such as TREC:s. Depending on the definitions used, a TREC can be regulated as a commodity, service, or security (Climate Change Legal Foundation, 2002). At the same time, in many countries the laws establishing TREC:s and air pollution control allowances (such as for SO2, NOx and greenhouse gasses) specifically state that they are not “property.”

If TREC:s and other tradable allowances are not considered property, the question has been raised as to whether they will be afforded the same protections as other investments under IIAs? While it does not appear that this issue has been raised in any IIA arbitration to date, it has been debated under NAFTA. NAFTA defines an investment broadly as: “interests arising from the commitment of capital or other resources in the territory of a Party to the economic activity in such territory.”

The Climate Change Legal Foundation analyzed the issue of TREC:s and NAFTA and concluded that:

NAFTA Chapter 6 applies measures related to investments in energy and basic petrochemicals. If [TREC:s] were classified as investments, both Chapters 11 and 6 would cover them. [TREC:s] exported in combination with their underlying electricity could also fall within the Chapter 11 definition. If [TREC:s] are created in pursuance to a contract for investment in Mexico by a U.S. company, they might be characterized as investment property. Investment by a U.S. company in Mexico is subject to Mexican foreign investment laws, the WTO Agreement on Trade Related Investment Measures and NAFTA Chapters 6 and 11 (Climate Change Legal Foundation, 2002).

Others believe that this is an overly broad interpretation of NAFTA as Chapter 6 applies primarily to trade in energy and basic petrochemical goods. Only Annex 602.3 may be said to be related with investment but, very discretely: (i) by reproducing the reservations otherwise expressed in Annex III to the Investment Chapter; (ii) by permitting performance clauses in service contracts with Pemex and CFE; and (iii) by encouraging independent power production in paragraph 5 (Alvarez, 2006). Such differences suggest that care should be taken in any renegotiation of an existing IIA.
or negotiation of a new IIA to make sure that investments in TREC\textsuperscript{s} and other tradable allowances are covered.

5.1.2 General Standards of Treatment

IIA core concepts of “fair and equitable treatment,” “national treatment,” “most-favored nation,” and “non-discrimination” under the general standard of treatment have also been discussed as possibly limiting a host country government’s ability to use some of the key policy tools described in Section 5.

For example, a debate has arisen on whether RPS\textsuperscript{s} are problematic under NAFTA’s national treatment rule if they are interpreted as discriminating against investment in energy projects that are not included in the RPS. Hydro Quebec has argued that RPS\textsuperscript{s} might be prohibited by NAFTA if they do not include large-scale hydropower (North American Commission of Concerned Scientists, 2005). In response, the North American Commission on Environmental Cooperation (CEC) commissioned a study to evaluate potential conflicts between NAFTA and RPS\textsuperscript{s} (North American Commission of Concerned Scientists, 1999). The CEC paper concluded that there may be conflicts arising from non-discrimination issues relating to RPS\textsuperscript{s}, but “portfolio requirements may well survive a challenge under NAFTA if applied in an equal and non-discriminatory way to all electricity production, regardless of origin.” (North American Commission of Concerned Scientists, 1999). In response, the Union of Concerned Scientists provided comments supporting their opinion that RPS\textsuperscript{s} are not inconsistent with NAFTA because “requiring a seller to demonstrate compliance with governing laws is not discriminatory.” (UCS, n.d.b). The Office of the Massachusetts Attorney General also submitted a letter to the CEC concurring with the UCS conclusion that there is no inconsistency between well drafted RPS\textsuperscript{s} (those that are consistent with the principles of free trade and do not discriminate against foreign electricity providers) and NAFTA (Ericson, 2002). No cases have been taken to arbitration on the RPS issue, so the question is still open.

In addition, arbitrators have not yet addressed the question of whether energy created by renewable sources is “like” energy created by non-renewable sources for purposes of the non-discrimination clauses of II\textsuperscript{a}s. If renewable and non-renewable sources are considered to be in “like circumstances,” this would be a problem both for RPS\textsuperscript{s}, as well as for any special incentives (tax or grant) given by a host state to investors in renewable energy (Werksman et al., 2001; UNCTC/ICC, 1992). In a related paper, Robert Howse has discussed the issue of “likeness” in relation to trade issues. He notes that “[t]here is simply nothing in the jurisprudence that would justify a per se exclusion of production methods from the analysis of ‘likeness’ or ‘directly competitive or substitutable’ nor, on the other hand, is there anything to suggest that production methods could be, on their own, dispositive of a finding of ‘unlikeness’ or a lack of direct competitiveness or substitutability . . . Further, evidence that consumers care about whether energy is renewable or not would be highly probative of ‘likeness’ or direct competitiveness or substitutability.” (Howse, 2005).

The UNCTAD has stated that an assessment of “like” circumstances should include an evaluation of whether two enterprises are in the same sector, the effect of
the policy objectives of the host state, and the motivation behind the measure (UNCTAD, 2004a). In UNCTAD’s view: “The key issue in such cases is to ascertain whether the discrimination is motivated, at least in part, by the fact that the enterprises concerned are under foreign control.” (UNCTAD, 2004a). Because efforts to support or “discriminate” in favor of renewable energy are usually motivated by a desire to produce cleaner, more secure power and not to discriminate against foreign investors, it seems reasonable to conclude that energy from renewable sources is not “like” energy from non-renewable sources for the purpose of the general treatment provisions of IIAs.

While there may be some concern about policies to promote renewable energy technology and general standards of treatment, the general standards of treatment can also provide important protections for the foreign energy investor. For example, in the Nykomb Synergetics Technology Holding AB (“Nykomb”) v The Republic of Latvia case, Nykomb owned the Latvian company Windau. Latvia and Windau entered into a contract to build a co-generation plant. Latvian companies are paid a “double tariff” as an incentive to build cogeneration plants, but Windau was not eligible because of its 100 percent foreign ownership. The Arbitral Tribunal held that this was discriminatory in violation of Article 10(1) of the ECT (The Arbitration Institute of the Stockholm Chamber of Commerce, 2003).

5.1.3 Expropriation

The tension between the right of investors to have their investments protected against “ takings” by government and the right of a host state to regulate the impacts of any such investments is increased under IIAs that include “indirect” or “regulatory takings” in the definition of expropriation (Werksman, et al., 2001). The key question appears to be the extent of the impact on the value of an investment that is required before a legitimate exercise of regulatory authority becomes a taking. While this issue has not yet arisen in the renewable energy context, it is hypothetically possible that an investor in a non-renewable energy source might challenge newly adopted incentives for renewable energy on the grounds that they reduce the value of its investment (Werksman, et al., 2001).

Several arbitrations have considered the issue of regulatory takings under NAFTA. For example, in Metalclad v. Mexico, it was found that the environmental regulations that restricted the investor from operating a landfill constituted an indirect expropriation (ICSID, 2000). The issue in Metalclad was whether certain assurances given to the investor by the Mexican Federal government generated legitimate expectations that the investor would be permitted to operate the landfill. The investor alleged that it was given assurances by Federal officials that a missing municipal construction permit would be issued. The investor proceeded to construction of the facility in reliance on those assurances. The facility was eventually shut down by the municipality. Subsequently a sub-federal agency issued an environmental decree to protect a rare cactus that clearly prevented operation of the facility. The Tribunal found that the investor had in fact been given assurances that, prior to investing and as a means to lure the investment, it would be permitted to operate. The landfill had
been “fully approved and endorsed by the federal government” when the municipality, Guadalcazar, denied Metalclad a construction permit because of environmental concerns.

Mexico petitioned the Supreme Court of British Columbia for a statutory review alleging that the Tribunal had exceeded its jurisdiction and that enforcing the award would violate public policy (NAFTA, 2005). In its review, the Supreme Court of British Columbia noted:

The Tribunal held that expropriation under the NAFTA includes covert or incidental interference with the use of property which has the effect of depriving the owner, in whole or in significant part, of the use or reasonably-to-be-expected economic benefit of property. This definition is sufficiently broad to include a legitimate rezoning of property by a municipality or other zoning authority. (Supreme Court of British Columbia, 2001)

The Supreme Court of British Columbia found that the expropriation decision by the tribunal was at least partly based on perceived violations of minimum treatment standards (in particular, transparency) and that this ‘infected its analysis’ of the expropriation issue. The Court did note that the definition of expropriation used by the Tribunal was broad, but that ‘the definition of expropriation is a question of law with which this Court is not entitled to interfere’ (Supreme Court of British Columbia, 2001). The Court further agreed that given the broad definition of expropriation, the tribunal was not “patently unreasonable” in its determination that the Environmental Decree was tantamount to expropriation (Supreme Court of British Columbia, 2001).

However, the record of the matter quite clearly showed that the Environmental Decree to protect “rare cactus” was but a last minute instrument tailor made by the municipality to prevent the facility from operating, and it has been asserted that the facts of this case do not support an argument of interference with bona fide regulation to protect the environment (Alvarez, 2006). As the NAFTA secretariat noted:

Each NAFTA Chapter 11 case is very fact specific and does not set a binding precedent for future cases. Therefore one should not draw general conclusions based on the outcome of a particular case. Neither the Tribunal nor the Court in Metalclad v. Mexico call into question the right of a local government to regulate on environmental and public health grounds. The decision of the Tribunal in Metalclad found that changes to the rules by the state government, after Metalclad had been led to believe that it had all necessary authorisations and had invested a substantial amount in its operation (the plant was ready to open), were tantamount to expropriation. That is not the same as denying the right of government to regulate. (NAFTA, 2002)

In a similar case, Pope & Talbot, Inc. v. Government of Canada, the investor claimed that government regulations were tantamount to expropriation (International Trade Canada, 2006). The Tribunal disagreed, stating that government
“interference,” including government regulation, is not expropriation unless it “interferes substantially with the owner’s ability to use, enjoy or dispose of its property” (International Trade Canada, 2001).

Similar results have been reached under other IIAs. For example, in an arbitration under the BIT between Spain and Mexico, Técnicas Medioambientales Tecmed, S.A. v. United Mexican States. Tecmed commenced an arbitration under ICSID rules after the Mexican government declined to renew a license to operate a landfill (ICSID, 2003). The Mexican government claimed that the refusal to renew was based on environmental violations. Tecmed asserted that revoking the license was not proportionate with the seriousness of the violations and that doing so was an indirect expropriation without compensation. Mexico responded that they had the ability to grant or deny licenses in accordance with domestic law, and that the action was appropriate to protect public health and the environment. The tribunal found that:

A measure could be a de facto indirect expropriation by its effects when the measure was adopted by the State, whether of a regulatory nature or not, was permanent and irreversible, and the assets and rights object of such a measure were affected in such a way that was impossible to exploit such assets and rights, thus depriving them of any economical value. It also stated that a regulatory measure could be an indirect expropriation by its characteristics when there was a lack of proportionality between the measure, the interest sought to be protected by such a measure and the protection of the investment, and as a result the economic value of the investment was destroyed.

The tribunal ruled that economic and commercial operations at the landfill had been “fully and irrevocably destroyed.” Also, because the site was a hazardous waste landfill, it had limited alternative uses. Thus, the tribunal ruled out the possibility of selling the property in the open real estate market. The tribunal also found that Mexico’s actions were not proportional to a ‘legitimate social goal.’ Mexico was ordered to pay for the expropriation, but was also given title to the property (thereby retaining any residual value of the property).

Host country policies designed to encourage investments in renewables seem unlikely to have a sufficiently large impact on the operations of non-renewable power sources to constitute a regulatory taking under the provisions of IIAs. Renewable power, while growing rapidly, remains a small percentage of total power production. In many countries, non-renewable fuels themselves enjoy production subsidies (IEA, 1999). While legislation banning outright the continued operation of non-renewable energy sources might well constitute a regulatory taking, support for expanded use of renewable energy seems unlikely to qualify.

5.1.4 Environmental Clauses
Environmental clauses in IIAs are not intended to protect investors’ rights. Their purpose is to clarify and make explicit host states’ rights to regulate environmental issues in a non-discriminatory manner. Therefore, strong environmental clauses in
IIAs can be helpful in supporting a host country’s right to adopt policies that encourage investment in renewable energy projects.

For example, in June 2005 the US Trade Representative (USTR) submitted an environmental review of CAFTA-DR (USTR, 2005c). The review included an assessment of the potential effect of CAFTA-DR’s investment provisions on the right to regulate the environment. USTR concluded that “we were unable to identify any concrete instances of US environmental measures that would be inconsistent with the Agreement’s substantive investment obligations . . . we do not expect the CAFTA-DR’s investor-state mechanism to significantly increase the potential for a successful challenge to U.S. environmental measures. The CAFTA-DR’s innovations in the substantive obligations and investor-state mechanism should provide coherence to the interpretation of the FTA’s investment provisions.” (USTR, 2005c).

The IISD model agreement includes environmental clauses as part of the host state obligations. Host states are obligated to maintain environmental standards and are obligated to establish minimum standards of environmental protection. The implications of this analysis for future efforts to renegotiate existing or negotiate new IIAs are considered in Section 6 below.

5.2 Potential Opportunities to Use International Investment Agreements to Help Overcome Barriers to Investments in Renewable Energy

In addition to their potential impact on national policies, IIAs may also offer opportunities to help overcome the major barriers to investments in renewable energy identified in Section 4.3 above.

Table 4 suggests two major areas of potential linkages with the overwhelming majority of IIAs (i.e. non-energy sector specific). First, the general provisions protecting investors’ rights (coverage, expropriation, fund transfers, dispute resolution and others) can be of immense benefit to all investors, including those in renewable energy. Second, if the non-discrimination provisions of an IIA were held to prohibit a host country government from providing special incentives to renewable energy sources that were not also available to non-renewable sources then presumably the reverse would also be true – that countries could not provide special treatment to non-renewable sources that are not also available to renewables. Given that many of the issues facing renewables stem from the existing web of institutional structures and incentives supporting non-renewable energy, a finding that those existing programs were in violation of the non-discrimination clause of an IIA could be of major value to investors in renewable energy sources.
Table 4: Key Barriers to Investment in Renewable Energy and Links with Core Concepts in International Investment Agreements

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Note: shading indicates key investment barriers that IIA core concepts might help overcome.

In addition to these opportunities under generic IIAs, energy specific investment agreements (such as the Energy Charter) could also be used as a platform for encouraging investment in renewable energy. Since many of the investment barriers in Table 4 above stem from the special characteristics of the electricity sector in general and renewable energy technologies in particular, they are most directly addressed through sector specific policies, rather than the more general provisions of most investment IIAs. Table 5 below shows the links between the major types of policies being used at the national level to promote investments in renewable energy and the major barriers to investment. In theory at least, any of these policies could be included in international agreements specifically designed to expand the markets for renewable energy.

Adopting such renewable energy specific policies in an international investment agreement, however, would be a major change from the traditional approach to IIAs.
First, the core concepts of IIAs are mostly negative in nature – prohibiting certain actions by governments – as part of an effort to protect foreign investors against discrimination and other unfair treatment. The key policies to promote renewable energy, however, are mostly positive in nature – reflecting a commitment by governments affirmatively to do something, whether that be restructuring their power sectors, changing their taxation systems, spending their tax revenues in new ways or making new types of information available. Such affirmative commitments are much harder for governments to make in international agreements given their political sensitivity in general and the concerns over loss of sovereignty that any such agreements raise. Second, most IIAs are just that – agreements to protect “investments,” no matter what sector any particular investment is in. Such protections are of great use to investors in renewable energy projects, but by their very nature, do not address the more specific barriers facing investments in the renewable energy sector. As such, efforts to use international investment law to promote investments in renewable energy projects should be placed in a wider context, embracing traditional IIAs (where some areas for work do remain), sectoral energy and environmental agreements, initiatives by multilateral development agencies, as well as efforts to inform and coordinate national policies. Some suggestions for areas of further work in these areas are discussed in the next section.

Table 5 Key Barriers to Investment in Renewable Energy and Links with Major Policy Tools Being Used to Promote Renewable Energy

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Note: shading indicates key barriers that major policy tools might help overcome.
6.0 CONCLUSIONS AND SUGGESTED NEXT STEPS FOR USING INTERNATIONAL INVESTMENT LAW TO PROMOTE INVESTMENTS IN RENEWABLE ENERGY

Encouraging more private investment in renewable energy is a key policy goal for a growing number of countries. International investment law – broadly defined – has a major role to play in helping to create the predictable and profitable market conditions needed to attract such investment. Based on the review and analysis in the preceding sections, areas for further work include the following.

6.1 Using Traditional IIAs

While traditional IIAs are the primary focus of this Chapter and remain a critical element of efforts going forward, there are a number of reasons why work in this area seems less pressing than that in the other areas described below.

First, there seems little reason to expect a new Multilateral Investment Agreement any time soon. The OECD discussions around the proposed MAI are finished. The WTO discussions around a new agreement on investments appear to be stalled. Even at the regional level, negotiations on proposed agreements such as the Free Trade Agreement of the Americas are moving slowly at best.

Second, model Bilateral Investment Agreements are increasingly including provisions that address many of the concerns raised by environmental advocates. Environmental provisions have helped to clarify governments’ continuing right to regulate to protect public health and the environment. New procedures for dispute resolution have helped increase the transparency of such proceedings. While more work can certainly be done to capture the potential environmental benefits of BITs (see the IIISD Model Agreement for example), progress is being made.

Third, overcoming the major barriers to investments in renewable energy will require governments affirmatively to commit to doing something (regulate, tax, spend, inform), not just to commit to avoid discriminating against foreign investors. Such affirmative, sector-specific commitments do not fit the traditional model of IIAs. As such, they appear to be best pursued through other international agreements and activities (as described below).

Finally, even the best IIAs cannot overcome major shortcomings in the investment frameworks in particular countries. Legal tools do not work in countries which do not respect the law. Investors care most about the laws in effect where the project is to be built. Private investors will invest in the most attractive projects in the most attractive countries. As such, efforts need to continue to help countries build markets that are attractive to the types of investors they seek – including those in renewable energy. International policy activities can best support these efforts at the host country level by making information, public funds and frameworks for internalizing the global costs of non-renewable energy available (as discussed below).

If a decision was taken to pursue a new MIT or BIT in a manner that best promotes investment in renewable energy, however, the parties should consider the following recommendations:
• Identify clearly the benefits of the potential investment agreement to businesses (increase predictability of host state action and investor responses thereto), host states (affirm right to regulate within traditional boundaries, attract more private investment), and civil society organizations (more investment in cleaner energy solutions) so that the negotiations have broad and strong support.

• Be as transparent as possible in and around the negotiations, including outreach to a wide range of stakeholders in both business and civil society.

• Include clear definitions of “investment,” “investor,” and “expropriation” so that parties to the agreement can understand the balance being created between private and public interests.

• Include a broad enough definition of “investment” to ensure that investments in “hybrid property” such as TREC and greenhouse gas emission allowances are protected.

• Clearly support the host states’ “right to regulate” in a non-discriminatory (at least with respect to foreign investors) manner on matters relating to climate protection and cleaner energy.

• Expressly provide that energy from renewable sources is not “like” energy from non-renewable sources for purposes of government support.

6.2 Using other International Investment Activities to Promote Investments in Renewable Energy

Many other international efforts are underway to increase private investment in general or in cleaner energy in particular. All of them are potential platforms for further efforts to use law to encourage investments in renewable energy. Some of the major areas for further work include the following:

Supporting efforts to articulate general investment principles to reflect in any IIA, other international agreement, national or regional policy regime.

A number of different groups are working to improve frameworks for private investments in general and renewable energy in particular. For example:

• UNCTAD advises developing countries on how to attract more FDI (UNCTAD, n.d.e);

• The World Business Council for Sustainable Development has published summaries of the key issues affecting country level attractiveness for private investment (IUCN, 2002);

• Ernst and Young publishes its annual Renewable Energy Country Attractiveness Indices based on its assessment of the factors considered by investors in clean energy (Ernst & Young, n.d.); and

• The Renewable Energy and Energy Efficiency Project and others offer guidance on reforming different countries’ market frameworks for renewable energy (REEP, n.d.b).

As the focus increasingly turns to how to put policies in place that best help
overcome the barriers faced by potential investors in renewable energy projects, it may make sense to step back from any particular treaty or country and try to articulate some starting point principles for the features that will make such policies of most use to investors. While such policies need to be “loud, long and legal,” a slightly longer list – reflecting the analysis in this Chapter as well as the learning from the initiatives listed above – might well be helpful to guide work on any individual policy effort in this area.

Continuing to encourage policy makers to incorporate clean energy into their infrastructure investment planning efforts

Many governments are facing a looming crisis in infrastructure financing. For example, the OECD has embarked upon an initiative, the OECD Futures Project on Global Infrastructure Needs: Prospects and Implications for Public and Private Actors. The main purpose of the project “is to bring together experts from the public and private sectors to take stock of the long-term opportunities and challenges facing infrastructures, and propose a set of policy recommendations for OECD Governments.” (OECD, n.d.e). Electricity is one of the major foci of this effort.

It is critical that such broad reviews of energy infrastructure include serious consideration of renewable energy options. While many governments are taking this on, non-renewable energy sources continue to dominate the construction of new power plants in many countries. Only by continuing to press for a greater role for renewable energy will that tide be shifted further toward cleaner energy options.

An increased focus on regional energy sector agreements may help in this area. Transmission grids are increasingly regional. Key features of investment frameworks are often, but not always, shared among many neighboring countries. Continuing development of the Energy Charter or even the electricity portions of NAFTA to reflect the lessons learned about promoting investments in renewable energy may offer opportunities for moving ahead.

Pursuing the opportunities offered by the post-Kyoto discussions

What happens after the Kyoto Protocol expires at the end of 2012 is a major topic of discussion in many policy circles. Most of those discussions are focused on the need for major new investments in cleaner energy and the policy tools for attracting that investment. Ensuring that the learning to date on the barriers to investment and the possible tools for overcoming those barriers are reflected in these discussions is a key area for further work.

At its most fundamental, however, the key focus of the post-2012 work should be on putting a price on carbon over the longer term. Doing so will help spur investments in less carbon-intensive power sources and fits the role of global policy addressing a global externalized cost issue. Tax and “cap and trade” based systems often receive the most attention in this regard as they set either a price or a ceiling for greenhouse gas emissions. In addition, some commentators have suggested that an RPS type standard be considered for greenhouse gas emissions as well. Under this approach, a floor would be established requiring that a set amount of electricity be

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28 Such as Aldyn Donnelly, GEMCo (http://www.gemco.org/), personal communication March 24, 2006.
purchased from “cleaner” sources (such as renewables) with the expectation that that floor will be increased over time.

Discussions of the future of greenhouse gas (GHG) credits should also consider their relation to TREC’s and other similar, but separate compliance obligations. From a private investor’s perspective, the goal here is to maximize the number of different revenue streams from renewable energy projects thereby increasing their attractiveness.

**Continuing to build the infrastructure for linking private investors into such policy discussions**

While governments need to understand what private investors are looking for, real private investors are often too busy doing deals to have time for lengthy conversations with government officials about future policy changes. A wide variety of efforts are underway to both gather information from private investors in renewable energy for transmission to government, as well as to create concentrated opportunities for policymakers and investors to exchange information. For example, the UK’s Carbon Trust and the Clean Energy Group in the US are sponsoring a Trans-Atlantic Dialogue on Cleaner Energy and the various trade associations (such as the American Council for Renewable Energy in the US) are hosting workshops bringing together public and private investors.

These efforts need to be encouraged and focused on how best to attract more investment so that the lessons learned can be reflected in new policies adopted at whatever level. Given that investors care most about the policy frameworks in place at the location of their project, it will be important to build this infrastructure at the sub-national, national, regional and global levels.

**Continuing to build the infrastructure for linking public and private pots of money dedicated to cleaner energy**

Neither public nor private capital acting alone will meet the investment needs in the renewable energy sector. Increasingly effective ways to link the public and private capital that have been committed to clean energy need to be found. For example, REEEP is developing a matchmaker service to bring Asian developers together with potential financiers both public and private to help spur projects in Asian countries. Law-related initiatives to support such efforts include:

- Reviews and descriptions of existing national investment frameworks for renewable energy;
- Support for efforts to design and implement more attractive national investment frameworks (such as the model law developed for India (REEEP, n.d.c));
- Input on efforts to determine the optimized roles for public and private funds in different kinds of, as well as in particular, transactions (grants, insurance, debt, equity, etc.); and
- Negotiation of the contractual agreements necessary to make any particular renewable energy project a reality.
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