Combating Climate Change Through Investment Arbitration

Anatole Boute*

*University Aberdeen Centre for Energy Law

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* LLM (Leuven), PhD (Groningen), admitted to the Brussels Bar (Janson Baugniet), Lecturer in Law (University of Aberdeen Centre for Energy Law), Legal Adviser to the IFC Russia Renewable Energy Program (The World Bank Group). This Article is based on a memo written for the United Nations Conference on Trade and Development. See U.N. Conference on Trade and Development, World Investment Report 2010: Investing in a Low-Carbon Economy (2010). Research assistance by Leanne Bain and Ryan Whelan is kindly acknowledged. This Article represents the views of the Author only, not necessarily of the organizations to which he is associated. All possibly remaining errors must be attributed to the Author.
INTRODUCTION

Private capital and technology play a central role in the transition to a low-carbon economy.1 In the absence of an international carbon price, the regulatory initiatives currently used to stimulate the participation of private investors in this transition are primarily directed at influencing the incomes of investments. At the national level, states create support schemes to enable the financial viability of low-carbon investments, such as renewable energy projects, energy efficiency improvements, and carbon capture and storage.2 At an international level, the flexible mechanisms of the Kyoto Protocol3—the Joint Implementation (“JI”) and Clean Development Mechanism (“CDM”)—provide low-carbon investors with an additional income to cover the higher costs of greenhouse gas (“GHG”) emission reduction projects that would, in theory, not have been realized without this support. Moreover, at national and regional levels, emissions trading schemes positively influence the financial viability of low-carbon investments by capping and trading GHG emissions.4

The potential costs and revenues of a project, however, are not the only considerations taken into account by investors. Investment decisions are also influenced by risks of ex post regulatory changes or interference by the state. Due to the dependence on public support and other regulatory structures that states create to internalize the carbon externality, low-carbon investments are particularly vulnerable to regulatory risks. Given the financial consequences of support policies for the state budget and consumers, states may be tempted to renege on promises of public support once the investments have

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been made and costs are “sunk.” A perception amongst low-carbon investors that the state might act opportunistically and change the “rules of the game” requires them to factor in a risk premium. Taking into account long-term and capital-intensive nature of most low-carbon investments, it is reasonable to assume that this perception of ex post public interference with the financial basis of low-carbon investments will increase the cost of climate policies. By contrast, economic and financial theory would suggest that a guarantee of protection against these risks may reduce the required returns and thus stimulate these investments.

The focus on the “income-side” of low-carbon investments has taken attention away from the importance of the “risk-side” of these investments. This contribution builds upon the idea that, to promote low-carbon investments, “mitigating risk is certainly an alternative to raising the level of compensation.” To be efficient, climate regulations need to be compatible with the way private investors make their investment decisions and must therefore reflect both the income and risk components of low-carbon investments.

Despite the considerable importance of regulatory risks for low-carbon investments, legal literature largely remains silent on how to best protect low-carbon investors against the occurrence of these risks. The debate on the interaction between investment arbitration and climate law, for instance, almost exclusively focuses on the potential constraining effect (“regulatory chill”) that investment standards might have on states intending to implement GHG emission reduction policies. The role that

7. See Mitchell, Bauknecht & Connor, supra note 6, at 297 (quoting OLE LANGNIS & PETER HELBY, FINANCING RENEWABLE ENERGY SYSTEMS 112 (1999)).
investment arbitration might play in reinforcing climate change mitigation policies (i.e. investment arbitration as a “force for good”) is only mentioned *en passant*.9

This Article examines whether investment arbitration could complement the existing income-based approach of climate policies with a risk-based approach and thus reinforce the credibility and effectiveness of climate change mitigation efforts. Indeed, international investment agreements (“IIAs”) aim to protect foreign investors against public interference with the financial and regulatory basis of their investments.10 International investment law is based on the necessity to reduce noncommercial regulatory and political risks in order to promote the inflow of foreign capital and technology.11 The substantive investment standards that are generally contained in IIAs include protection against expropriation, the provision of fair and equitable treatment, and nondiscrimination and umbrella (*pacta sunt servanda*) clauses. Are these international investment protection standards capable of shielding low-carbon investments against substantial change by host states in terms of the support mechanisms that they create to attract such...
investment? The answer to this question will determine the ability of international investment law to contribute to the international efforts required to combat climate change.12

In Part I, this Article briefly recalls the main regulatory principles underlying the support mechanisms that states develop to attract low-carbon investments and by highlighting how states may interfere with promised support. Part II looks at the regulatory risks in light of current arbitral practice. Whether low-carbon investments would answer to the definition of “investments” under international investment law is questioned in Part II.A. Part II.B then analyzes the expropriation standard, Part II.C considers the fair and equitable treatment standard, Part II.D looks at the nondiscrimination principle, and Part II.E examines umbrella clauses. Finally, Part II.F analyzes the extent to which states could justify possible breaches of these investment protection standards on the basis of public policy objectives. Given that most GHG emission reductions will have to take place in the energy sector, special attention is paid throughout this Article to the energy-specific investment regime of the Energy Charter Treaty.13

This Article demonstrates that investment arbitration provides the necessary conceptual tools required to improve the regulatory stability and predictability that is necessary for low-carbon investment. It has the potential to protect low-carbon investments against the risks of regulatory changes that can affect climate policies. By providing these guarantees of stability, investment arbitration can reinforce the credibility of climate change mitigation policies. However, in the absence of a doctrine of precedent in international investment law, low-carbon investors have no certainty that arbitral tribunals will follow an interpretative approach that adequately protects their

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investments. It is precisely this certainty that is needed to reduce the costs of climate change mitigation policies.

Following the reasoning underlying the Energy Charter Treaty, this Article examines the idea of creating a specific investment treaty for climate change mitigation projects in Part III. In Part IV, this Article proposes to integrate a low-carbon specific investment protection regime in a new international agreement on climate change. This approach would not require the development of new investment disciplines, but could be limited to an official endorsement of existing interpretative approaches.

I. REGULATORY RISKS IN CLIMATE CHANGE MITIGATION POLICIES

A. Risks in the Flexible Mechanisms of the Kyoto Protocol

The CDM, defined in Article 12 of the Kyoto Protocol, refers to the implementation of project activities that reduce GHG emissions by Annex I parties (i.e. states with GHG emission limits) or by subordinate legal entities in non-Annex I parties.15 The emission credits generated by such projects are known as Certified Emission Reductions ("CERs") and can be used by Annex I parties to meet their emission reduction targets.16 CDM project activities thus promote the transfer of low-carbon technologies from industrialized countries to developing countries.17

The CDM is supervised by the CDM Executive Board.18 This international institution approves CDM projects and issues CERs in accordance with the following procedure.19 First, since

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15. Kyoto Protocol, supra note 3, art. 12; see Maria Netto & Kai-Uwe Barani Schmidt, CDM Project Cycle and the Role of the UNFCCC Secretariat, in LEGAL ASPECTS OF IMPLEMENTING THE KYOTO PROTOCOL MECHANISMS: MAKING KYOTO WORK 175, 175 (David Freestone & Charlotte Streck eds., 2005).
17. See Netto & Barani Schmidt, supra note 15, at 175.
participation in the CDM is voluntary, host states, as well as home countries, have to endorse the project.\textsuperscript{20} States, the Designated National Authority (“DNA”) in particular, generally approve projects by signing so-called Letters of Approval.\textsuperscript{21} Second, the project participants have to prepare a Project Design Document (“PDD”) outlining the technical design of the project activity and determining its “additionality”\textsuperscript{22} in comparison to what would occur without the project (“Business as Usual”). The PDD has to be approved by a Designated Operational Entity (“DOE”).\textsuperscript{23} Third, after being validated by a DOE, the proposed project activity must be submitted for registration by the CDM Executive Board.\textsuperscript{24} Once registered, the project activity can be implemented and can begin to generate emission reductions. Emissions reductions are calculated in relation to a baseline representing the emissions that would occur in a Business as Usual scenario. A DOE must independently control the monitoring of the project activity and certify the amount of emission reductions achieved. On the basis of this certification, the CDM Executive Board issues a corresponding amount of CERs.

JI, defined in Article 6 of the Kyoto Protocol, refers to the implementation by Annex I parties, or its legal entities, of


\textsuperscript{22} See Modalities and Procedures for a Clean Development Mechanism, supra note 20, at 14–16.

\textsuperscript{23} The Designated Operational Entity is an accredited organization tasked with the independent validation of proposed CDM project activities and verification of emission reductions. See id. at 15.

\textsuperscript{24} See id.
project activities that reduce greenhouse gas emissions in other Annex I parties. 25 The emission credits generated by JI projects are known as Emission Reduction Units ("ERUs"). If a host party meets certain eligibility requirements, 26 it may, under the so-called "Track 1 procedure," independently verify the additionality of emission reductions and issue ERUs. 27 ERUs are issued in proportion to the amount of GHG emissions that the project reduces in relation to a baseline. 28 ERUs are generated by converting Assigned Amount Units ("AAUs"). 29 If a host party does not meet these requirements, the "Track 2 procedure" applies. Under this procedure, JI projects are, in a similar way to the CDM project cycle, regulated by an international body—the JI Supervisory Committee. 30 It is also this institution that approves projects and issues ERUs corresponding to the verified emission reductions. 31

The risk of the state interfering with the issuance of CERs to CDM projects is relatively limited. 32 Indeed, it is an international institution—the CDM Executive Board—and not host states that approve these projects and issue the GHG emission credits. 33 The same applies to projects implemented under the JI "Track 2 procedure." 34

27. See id. at 7.
28. See id. at 8, 12.
29. The allowances allocated to the Annex I parties corresponding to their greenhouse gas emission limits.
30. See Guidelines for the Implementation of Article 6 of the Kyoto Protocol, supra note 26, at 7.
31. See id. at 7–9.
33. See Modalities and Procedures for a Clean Development Mechanism, supra note 20, at 14, 19.
34. See Sander Simonetti, Legal Protection and (the Lack of) Private Party Remedies in International Carbon Emission Reduction Projects, 28 J. ENERGY & NAT. RESOURCES L. 171, 179 (2009). The risks related to the issuance of emission credits by the CDM Executive
Nevertheless, in theory, host states could detrimentally affect the investors concerned by exercising influence on the entities (i.e. DOE or Accredited Independent Entity) that are in charge of verifying the emission reductions. This could have an impact on the amount of emission reductions that are certified as having been achieved by the project activity. This, in turn, would affect the amount of CERs and ERUs issued. Host country pressure on the DOE could also affect the renewal of the project beyond the first crediting period, that is beyond the first span of time during which the host country issues ERUs.

The risks to JI projects implemented under the “Track 1 procedure” may be more important. Under this procedure, the discretionary power of the host country is much broader due to the country’s central role in the issuance of ERUs. Host states may, for instance, refuse to issue or transfer ERUs to private foreign investors notwithstanding their commitments as contained in the Letter of Approval. Host states may be tempted to do so in order to avoid reducing the amount of AAUs available to meet international emission reduction obligations. Host states might also influence the issuance of ERUs by imposing changes to the baseline that is used to calculate emission reductions, or simply by withdrawing the approval of a JI project and thus its eligibility to receive ERUs. Investors could also face the risk of nationalization of their investment.


B. Risks in National Support Schemes

National support for renewable energy sources, energy efficiency improvements, or other types of low-carbon investment is often granted by creating a system of “green certificates” (or “white certificates”), “feed-in tariffs,” “premiums,” or by granting investment aid or fiscal advantages to electricity producers using renewable energy sources.40

Usually, “green certificate” schemes are arranged in such a way that regulatory authorities deliver tradable certificates for a certain amount of electricity generated from renewable energy sources.41 The value of such certificates is created by obliging electricity suppliers to submit a certain amount of certificates to the regulatory authorities.42 This amount is generally determined in proportion to the producers’ supplies of electricity to end consumers.43 Suppliers that fail to meet this quota-obligation are fined.44 A secondary market for certificates is created where eligible producers and suppliers with too many certificates can sell their certificates to other market players.45

With “feed-in tariff” schemes, the electricity produced from renewable energy installations is paid at a fixed minimum price.46 This minimum purchase price is generally set higher than the market price and guaranteed over a specified

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43. See VAN DER LINDEN ET AL., supra note 41, at 10.
44. See DAVID DE JAGER & MAX RATHMANN, POLICY INSTRUMENT DESIGN TO REDUCE FINANCING COSTS IN RENEWABLE ENERGY TECHNOLOGY PROJECTS 38 (2008).
46. See id. at 4.
duration. Usually, this fixed price is combined with a purchase obligation for electricity suppliers or network companies.

The difference between a “feed-in tariff” and “premium” schemes is that the latter involves a premium being applied on the electricity market price, whereas feed-in tariffs entitle producers to one, all-inclusive, and specific price. In premium schemes, the amount of support paid to the producers fluctuates with the price of electricity on the wholesale market.

The experience gathered regarding the implementation of support schemes suggests that states might easily succumb to the temptation of interfering with the amount and duration of support. Recent analyses on the effectiveness of support schemes for renewable energy implemented in the European Union (“EU”), for instance, show that Member States have introduced fundamental changes to their policy frameworks. These changes have jeopardized the credibility of renewable energy policies and generated high investment uncertainty.

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49. See id.
50. See CANTON & JOHANNESSON LINDÉN, supra note 47, at 9.
Commentators highlight the fact that the austerity measures being introduced to cut budget deficits in Europe will affect the support for renewable energy. 54 Indeed, subsidies for renewable energy are often considered “an easy target in times of crisis.”55 The problem is not just that governments “will reduce subsidies for new projects. The industry regards cuts as inevitable . . . . More serious is the fear that [governments] will cut agreed subsidies for projects built or under construction.”56

The European experience shows that investment uncertainty resulting from the risk of cuts has a very negative effect on the development of renewable energy.57 This can be explained by the fact that, from an investor’s perspective, “a financial change of the support system is considered the most important risk factor” for investments in renewable energy.58 This is because the level of support is the most important element influencing expected profit.59

The success of support schemes for renewable energy thus depends on the “credibility of the public authority’s long-term commitment.”60 Gaining this credibility by minimizing investors’ expectations of ex post regulatory adjustments is, however, a difficult task. The risk is that, once investments are made, the public authorities will be tempted to reconsider their commitments.61 Indeed, according to Dominique Finon and Yannick Perez:

The public authority is not committed in the regulatory contract as much as the developers-operators who invest money in [renewable energy sources] RES-E projects; this opens the door to discretionary changes in the contract. The possible government’s opportunism, exerted in unforeseeable amendments of the design of the instruments or by willing to change the instrument, creates a risk of

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55. See Mallet, supra note 54.
56. Id.; see Marata et al., supra note 52, at 498–99.
59. See RAGWITZ ET AL., supra note 52, at 178.
60. Finon & Perez, supra note 6, at 83.
61. See Helm, Hepburn & Mash, supra note 5, at 440.
expropriation of quasi-rents on existing RES-E plants or current RES-E investments, and this risk can be a strong deterrent against investing in RES-E.62

The authorities could, for instance, withdraw the promised support or shorten its duration. They could refuse to pay or diminish the amount of support. In countries with green certificate schemes, the host country could refuse to issue the certificates or issue fewer certificates than those expected under the rules existing at the moment of investment. The host country could also reduce the quota and thereby depress the price for green certificates.

Investments in energy efficiency improvements made on the basis of “white” certificates or feed-in tariffs, and investments in carbon capture and storage based on public support, face similar risks.

II. PROTECTION OF LOW-CARBON INVESTMENTS UNDER EXISTING IIAS

A. Low-Carbon Investments as “Investments” Protected by IIAs

To be protected under international investment law, low-carbon investments should qualify as “investments” within the meaning of the applicable IIAs.63 Arbitral practice developed on the basis of the Convention on the Settlement of Investment Disputes Between States and Nationals of Other States64 defines an “investment” on the basis of four criteria (the so-called Salini test): contributions by the investor, certain duration of performance, the existence of operational risks, and the contribution to the economic development of the host state.65

62. Finon & Perez, supra note 6, at 83; see Lucy Butler & Karsten Neuhoff, Comparison of Feed-in Tariff, Quota and Auction Mechanisms to Support Wind Power Development, 35 RENEWABLE ENERGY 1854, 1861 (2008); Angus Johnston, Amalia Kavali & Karsten Neuhoff, Take-or-Pay Contracts for Renewables Deployment, 36 ENERGY POL’Y 2481, 2482 (2008).


65. See Salini Costruttori S.P.A v. Kingdom of Morocco, ICSID Case No. ARB/00/4, Decision on Jurisdiction, ¶ 52 (July 23, 2001), 6 ICSID Rep. 400 (2004); see
Most low-carbon investments are likely to fulfill the *Salini* criteria. Indeed, investments in renewable energy or other low-carbon technologies are generally characterized by their high capital intensity and long-term pay-back period. The high costs and social relevance (e.g. for energy supply) of these investments expose them to considerable economic, financial, and political risk. Finally, it cannot be doubted that low-carbon projects, particularly those in the energy industry, are important for the development of the national economy.

The Energy Charter Treaty investment regime is limited to “any investment associated with an ‘economic activity in the energy sector.’” Renewable energy projects fall within this scope. Indeed, the Final Act of the European Energy Charter Conference specifies that renewable energy sources are “illustrative of Economic Activity in the Energy Sector.”

The same conclusion applies to energy efficiency improvement projects. Energy efficiency measures apply to the production, transmission, distribution, or sale of energy products. These measures are by definition associated with the energy sector. Moreover, the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects considers energy savings to be a “source of energy”—the so-called “fifth energy source” besides natural gas, oil, coal, and uranium. Energy efficiency investments that lead to energy savings could therefore be considered as an economic activity related to the exploitation of this “fifth” source of energy.

Given the intrinsic relationship between GHG emissions and the energy sector, most other low-carbon investments are also likely to fall within the scope of the Energy Charter Treaty’s

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69. *ENERGY CHARTER SECRETARIAT, supra* note 11, at 25.
71. *See id.* art. 1(1), at 92.
application. The Energy Charter secretariat considers that carbon capture and storage is part of the “energy cycle.” 72 Carbon dioxide capture, its transportation by pipelines, and its storage can, according to the Energy Charter secretariat, be certified as being “Economic Activities in the Energy Sector.” 73 More generally, the secretariat argues that “[carbon dioxide] may be taken within the coverage of the term ‘energy related activity.’” 74

A more delicate issue is whether the rights associated with low-carbon investment—i.e. the right to benefit from support for renewable energy or the right to receive CERs or ERUs—could qualify as “investments” within the meaning of IIAs. 75 In their definition of “investment,” many IIAs include “rights conferred by law or contract.” 76 Arbitral tribunals 77 and leading commentators 78 have consistently ruled that contractual and regulatory rights can qualify as “investments,” and that they are capable of expropriation. Investors in renewable energy projects and in JI and CDM projects generally hold contractual and regulatory rights to benefit from support. 79 For renewable


73. See id.

74. Id. at 8.


76. See, e.g., Energy Charter Treaty, supra note 13, arts. 1(6)(c), 1(6)(f); see also DOLZER & SCHREUER, supra note 10, at 60; CAMPBELL MCLACHLAN ET AL., INTERNATIONAL INVESTMENT ARBITRATION: SUBSTANTIVE PRINCIPLES 173 (2007).


energy projects, these rights result from agreements that investors conclude with the national public authorities in charge of the implementation of the national support schemes for renewable energy.\textsuperscript{80} These agreements concern, for example, the certification of renewable energy installations or the issuance of renewable energy certificates that entitle the operators of eligible installations to public support.\textsuperscript{81} Regulatory rights are derived from the national regulatory framework that governs the support of renewable energy sources.\textsuperscript{82} Similarly, the implementation of JI and CDM projects involve the conclusion of agreements that formalize the host state’s approval of the projects (“Letters of Approval”).\textsuperscript{83} These agreements also provide the investors with contractual claims regarding the future issuance or transfer of ERUs or CERs.\textsuperscript{84} Moreover, national regulations governing the implementation of JI projects confer upon investors that fulfill all procedural criteria the regulatory right to receive ERUs. It is arguable that the contractual and regulatory right to benefit from support schemes and to receive CERs or ERUs would come within the broad ambit of “investments” as understood in arbitral practice.\textsuperscript{85}


\textsuperscript{82} See Boute, supra note 79, at 109–10.

\textsuperscript{83} See O’Sullivan & Cormier, supra note 21, at 223.

\textsuperscript{84} See Streck, supra note 25, at 118–19.

The classification of regulatory and contractual rights relative to the financial support of low-carbon investments as “investments” has the effect of bringing these rights within the ambit of protection afforded by IIAs. It does not, however, necessarily mean that these rights are individually protected under the investment disciplines of these IIAs.

Arbitral tribunals are reluctant to isolate particular elements of a larger investment operation and qualify these elements as separate investments that would benefit from individual protection. This is in accordance with the “totality of rights,” “indivisible whole,” or “general unity of an investment operation” theories. Under these theories, a claim that “forms part of a larger series of transactions would not on its own qualify as an investment.” IIAs, therefore, do not separately protect the individual rights associated with an investment transaction. IIAs only protect the general investment itself. Allegations of expropriation, for instance, are assessed on the basis of the impact that the contested measures will have on the general investment, not on the potential destruction or deprivation of individual rights associated with this general investment.

Some arbitral tribunals have nevertheless accepted that specific rights associated with a general investment transaction can individually qualify as investments. These tribunals justified this approach by highlighting the importance of these specific rights for the making of the general investment. In Eureko, the tribunal argued that “since the grant to Eureko of [these specific] rights . . . was a key element of the investment, without which it appears that there would have been no investment at


all, the Tribunal concludes that those rights have some economic value and are entitled to protection under the Treaty.”

The specific rights were “critical” to the making of the general investment. The arbitral tribunals were therefore willing to “unbundle” the general investment transaction in specific investments to protect specific rights individually under the investment disciplines of the applicable IIA.

Given the absence of an international carbon price, the provision of additional financial support is often an essential precondition—or “key element”—for the making of low-carbon investments. Support under the JI and CDM mechanisms, for instance, depends on the investment “additionality” of the proposed projects. Project participants must not only demonstrate that their investments will reduce GHG emissions in relation to Business as Usual, but they must also prove that the financial viability or financial attractiveness of their activity depends on additional support provided by ERUs and CERs. In theory therefore, the financial support represented by these GHG emission credits constitutes a critical part of the economic foundation of the investment. By the same token, the lack of internalization of the carbon externality in electricity prices, and the relatively high investment cost of renewable energy installations in comparison to traditional power plants, result in these investments being, for the moment, dependent on public support. Following the award reasoning in Eureko, the contractual and regulatory right to benefit from support could thus qualify as a specific “investment” entitled to individual protection under the applicable IIA.

89. Eureko, supra note 88, ¶ 145 (emphasis added); see Middle East Cement Shipping & Handling Co., S.A. v. Arab Republic of Egypt, ICSID Case No. ARB/99/6, Award, ¶¶ 100–01, 135–38 (Apr. 12, 2002), 7 ICSID Rep. 173 (2005) [hereinafter Middle East Cement].

90. See Eureko, supra note 88, ¶¶ 144–45.

91. On the notion of “unbundling” or “dissection” of property rights in the context of international investment law, see M. SORNARAJAH, THE INTERNATIONAL LAW ON FOREIGN INVESTMENT 371–72 (3d ed. 2010).

92. See Kyoto Protocol, supra note 3, arts. 6(1), 12(5)(c); Modalities and Procedures for a Clean Development Mechanism, supra note 20, at 14–16.

The approach followed by the *Eureko* tribunal offers considerable protection to investors that base their general investment decisions on specific contractual and regulatory rights, such as investors in renewable energy or in JI and CDM projects. M. Sornarajah argues that:

From the point of view of property protection, the abstract notion of property as a series of intangible rights has a positive effect in that it makes it easier to protect contractual rights . . . . A complete range of possible uses of property is covered through an unbundling and spelling out of the package of rights that previously constituted a single bundle . . . . One could argue that a series of property rights is spelt out and that impairment of any of those property rights could amount to a taking.94

However, as mentioned above, the approach followed by the *Eureko* tribunal is an exception to the theory of “general unity of an investment operation.”95 Investors have no guarantee that arbitral tribunals would accept the “unbundl[ing]” of a general investment transaction in a series of individual rights, and grant these rights separate protection under the investment disciplines of the applicable IIA.

B. *Withdrawal of Support as Partial Expropriation*

Withdrawning support for low-carbon investment nullifies an investor’s rights to benefit from this support. Could the affected investors argue that such interference with their rights constitutes a measure tantamount to expropriation? Could investors in JI projects argue that a state’s refusal to issue or transfer ERUs qualifies as an expropriation of their right to receive these emission credits? Could CDM project participants successfully invoke the expropriation standard against public interference with CERs?

In accordance with established arbitral practice, the threshold that must be reached before an action amounts to an expropriation is high. Measures must have a substantial impact on the economic benefit and value of the investment

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94. SORNARAJAH, supra note 91, at 371–72.
95. *Enron*, supra note 87, ¶ 70; see Schreuer & Kriebbaum, supra note 86, at 761.
concerned. They must “radically deprive[] [the claimant] of the economic use and enjoyment of its investment,” “effectively neutralize the benefit of the [claimant’s] property,” “render [the claimant’s property] rights [] useless,” or “have a similar disposessory effect.” Expropriation therefore results from actions that deprive the investor of full ownership and control of the investment.

State interference with the support for low-carbon investment is unlikely to destroy the economic value of the overall investment or deprive investors of full ownership and control of their assets. Even if the support for renewable energy is entirely cancelled, investors are still in control of their installations. They continue to receive revenues for the electricity produced and sold on the market. Similarly, a state’s refusal to issue ERUs does not render an investor’s property rights in the overall JI investment useless. Public interference with CERs does not radically deprive CDM investors of the economic use of their investments. Indeed, for projects benefiting from support under the flexible mechanisms of the Kyoto Protocol, “[i]ncome from the sale of carbon credits usually makes up only a portion of the overall project budget, meaning that project owners also need other sources of financing to carry out their plans.” The protection of low-carbon investors under the expropriation standard would therefore depend on whether the right to receive support

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98. CME Czech Republic, supra note 88, ¶ 150.


102. Kulovesi, supra note 19, at 150.
constitutes a specific investment that is protected independently from the impact on the overall investment.

As mentioned above, most arbitral tribunals opt to follow the theory of “the general unity of an investment operation.” In accordance with this theory, these tribunals refuse to qualify measures that destroy specific rights as expropriation when the investors remain in control of the overall investment to which these rights are associated. In CMS Gas Transmission Co. v. Argentine Republic and in Occidental Exploration and Production Co. v. Republic of Ecuador, for instance, each tribunal “rejected the possibility that an investment can be disassembled into a number of discrete rights, each of which is capable of being expropriated independently of the overall investment.” The tribunal reached that conclusion despite the fact that the applicable IIAs included “any right deferred by law or contract” within the definition of an investment.

In Middle East Cement Shipping and Handling Co., S.A. v. Arab Republic of Egypt, by contrast, the tribunal chose to examine specific rights and assets separately under the expropriation clause. Having analyzed whether each individual right met the definition of “investment” outlined in the applicable IIA, the tribunal examined whether the host state had deprived the investor of the value of each specific right independently of the impact on the overall investment. The tribunal in Eureko B.V.

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103. See, e.g., Enron, supra note 87, ¶ 70; Schreuer & Kriebaum, supra note 87, at 760–71.
104. See Ursula Kriebaum, Partial Expropriation, 8 J. WORLD INVESTMENT & TRADE 69, 73–78 (2007); see also DOLZER & SCHREUER, supra note 10, at 107.
107. See Middle East Cement, supra note 89, ¶¶ 107, 143–44.
108. See id. ¶¶ 100–01, 135–38.
109. See id. ¶¶ 107, 143–44.
v. Poland followed a similar approach. Although it explicitly acknowledged that the contested measure did not affect the basic investment, it ruled that the host state had expropriated the specific rights—“key elements”—associated with this investment. According to Ursula Kriebaum, the Eureko award “demonstrates that even in a situation where the basic investment remains unaffected, the deprivation of contract rights that are related to the basic investment may amount to a taking.”

Other awards have followed an intermediary approach. In CME Czech Republic B.V. v. Czech Republic, the tribunal accepted that the specific rights in question were covered by the definition of investment and could accordingly be expropriated. However, in contrast to the Middle East Cement and Eureko awards, the tribunal ruled that the measure amounted to an expropriation because it “destroyed . . . the commercial value of the investment.”

Reflecting on the Middle East Cement, Eureko, and CME cases, Kriebaum argues that determining whether a “right is capable of economic exploitation independently of the remainder of the investment” is an important criterion in assessing a specific right, in isolation from the overall investment, under the expropriation standard. Specific rights will be protected individually against expropriation if these rights are “key elements” of an investment and can be exploited separately from the rest of the investment. According to Kriebaum, if these criteria are met, interference with such specific rights could constitute a “partial expropriation” that would violate the expropriation standard.

ERUs and CERs have an intrinsic economic value. They can be sold independently on the international carbon market. It

110. See Eureko, supra note 88, ¶ 145.
111. See id.
112. See Kriebaum, supra note 104, at 81.
113. See CME Czech Republic, supra note 88, ¶¶ 376, 384.
114. See id. ¶ 591; see also Compañía de Aguas del Aconquija, supra note 77, ¶¶ 7.5.25–26.
115. See Kriebaum, supra note 104, at 83.
116. See id.
117. See id.
118. See Wemaere & Streck, supra note 79, at 36.
is arguable that they constitute a “right [that] is capable of economic exploitation independently of the remainder of the investment.”\textsuperscript{119} They could, therefore, be subject to partial expropriation.

Qualifying support schemes for renewable energy as independent economic rights is less straightforward. “Green certificates” are usually tradable on a secondary market where they can be sold independently from the overall investment. Green certificates could, therefore, qualify as individual investments that could be subject to partial expropriation. However, “feed-in tariffs” or “premium schemes” entitle the operators of renewable energy installations to fixed prices.\textsuperscript{120} This fixed support usually may not be traded independently from the main electricity transaction.\textsuperscript{121} Feed-in tariffs and premium schemes, therefore, cannot be considered capable of independent economic exploitation. In accordance with current arbitral practice, investors will find it more challenging to successfully invoke the expropriation standard against state interference with feed-in tariffs and premium schemes than against state interference with green certificates.

C. Protection Under the Fair and Equitable Treatment Standard

It is generally accepted that the fair and equitable treatment standard requires the host state to observe the “basic expectations that were taken into account by the foreign investors to make the investment.”\textsuperscript{122} An investor’s legitimate expectations must be based on “representations, commitments or specific conditions offered by the State concerned”\textsuperscript{123} and

\begin{itemize}
  \item \textsuperscript{119} Kriebaum, \textit{supra} note 104, at 83.
  \item \textsuperscript{120} See id.
  \item \textsuperscript{121} See id. (describing how feed-in tariffs consist as part of a “total price per unit of electricity paid to the producers”).
\end{itemize}
relied upon by the investor in making the investment. Arbitral tribunals pay particular attention to the conditions that the host state proposes and the promises it makes to attract foreign investors. In Sempra Energy International v. Argentine Republic, for instance, the tribunal considered that the requirement not to affect the basic expectations taken into account by the investor to make its investment “becomes particularly meaningful when the investment has been attracted and induced by means of assurances and representations . . . .” In Glamis Gold, Ltd. v. United States, the tribunal specified that a breach of the fair and equitable treatment standard may be exhibited by “the creation by the State of objective expectations in order to induce investment and the subsequent repudiation of those expectations.” In CME Czech Republic, the tribunal considered that the host state breached its obligation of fair and equitable treatment by “evisceration of the arrangements in reliance upon with [sic] the foreign investor was induced to invest.” W. Michael Reisman and Mahnoush Arsanjani argue that: “Where a host State which seeks foreign investment acts intentionally, so as to create expectations in potential investors with respect to particular treatment or comportment, the host

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124. See Técnicas Medioambientales Tecmed, supra note 97, ¶ 154; see also Eureko, supra note 88, ¶ 235. On the importance of investors’ reliance on expectations to make their investment decisions, see Mohammad Ammar Al-Bahloul, supra note 77, ¶¶ 199–217.

125. See Sempra Energy Int’l v. Arg. Republic, ICSID Case No. ARB/02/16, Award, ¶ 298 (Sept. 28, 2007), http://icsid.worldbank.org/ICSID/FrontServlet?requestType=CasesRH&actionVal=showDoc&docId=DC694_En&caseId=C8 [hereinafter Sempra]. The Sempra award has been nullified by the decision of the ad hoc committee of June 29, 2010 on the Argentine Republic’s Application for Annulment of the award. The ad hoc committee did not, however, criticize the Sempra tribunal’s interpretation and application of the fair and equitable treatment standard. It nullified the award based on a manifest excess of power in the application of the emergency exception of the applicable bilateral investment treaty. See Sempra Energy Int’l v. Arg. Republic, ICSID Case No. ARB/02/16, Annulment Proceeding, ¶ 223 (June 29, 2010), http://icsid.worldbank.org/ICSID/FrontServlet?requestType=CasesRH&actionVal=showDoc&docId=DC1550_En&caseId=C8.


127. See CME Czech Republic, supra note 88, ¶ 611.
state should... be bound by the commitments and the investor is entitled to rely upon them in instances of decision.”  

Support schemes for renewable energy create incentives that aim to stimulate private investment in the development of renewable energy. Similarly, national regulatory frameworks that govern JI projects aim to attract investment in GHG emission reduction projects to the benefit of the national economy. Low-carbon investors build their business cases on the basis of these policies and promises of support. They invest in reliance upon the faithful implementation of support commitments made by host states. Investors in renewable energy expect to receive public support in accordance with the schemes existing at the time of investing. Participants in JI projects meanwhile count on an amount of ERUs corresponding to the verified emission reductions that are generated by their approved projects.

Given the lack of internalization of the carbon externality, public support is a conditio sine qua non of a low-carbon investment. It is often the “essential foundation for the

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129. See IEA, supra note 2, at 293.
130. See Streck, supra note 25, at 107.
132. See DE JAGER & RATHMANN, supra note 44, at 10–11.
134. Streck, supra note 25, at 118–19.
investment—without it, it [the investment] could not survive economically.”136 The fair and equitable treatment standard could therefore provide important guarantees of protection against eviscerations by the state on the arrangements it has made to attract low-carbon investments. According to the United Nations Conference on Trade and Development, the fair and equitable treatment standard “could be used to challenge the refusal of expected government support [and] the dismantling of market-creating mechanisms.”137

The pre-investment legal order does not only form the framework for the positive reach of investors' expectations. It also provides “the scope of considerations upon which the host state is entitled to rely when it defends against subsequent claims of the foreign investor.”138 In the design of national JI regulations, states often aim to retain a degree of discretion to issue and discontinue ERUs.139 According to Werksman, “[w]hen establishing emissions allowance and offset schemes at the domestic level, government authorities have been careful to avoid any legal characterization that these instruments can provide the basis for legal entitlements or property rights.”140 Similarly, states can maintain a degree of regulatory discretion in the design of support schemes for renewable energy sources by stipulating that the amount and duration of support will be subject to revisions.141 Are such “waiver clauses” sufficient to

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140. Id. at 689.

prevent the creation of legitimate expectations protected under the fair and equitable treatment standard?

The Court of Justice for the European Union was confronted with a similar question. This question arose in the context of a claim challenging the withdrawal of a support scheme for renewable energy under the principle of the protection of legitimate expectations in EU law.142 Plantanol—a German manufacturer of biofuel—complained that, by withdrawing a tax exemption scheme that was aimed at promoting the use of biofuel in the transport sector, Germany had violated Plantanol’s legitimate expectations to benefit from this scheme.143 Germany defended the contested withdrawal by arguing that it was necessary to avoid overcompensating biofuel producers following the introduction of new regulatory obligations, and changes in primary energy prices.144 The tax exemption scheme was based on a former directive created to promote the use of biofuels for transport145 and on the Council Directive for the taxation of energy products.146 The latter Directive explicitly entitles Member States to reconsider and withdraw support to avoid overcompensation.147 The European Court of Justice argued on this basis that:

[A] regulatory provision of this kind was . . . capable of indicating at the outset to prudent and circumspect economic operators that the tax exemption scheme applicable to biofuels was liable to be adjusted or even withdrawn by the national authorities in order to take account of changes in certain external circumstances and that, consequently, no certainty that such a scheme would

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143. Id. ¶¶ 20–30.
144. Id. ¶ 61.
147. See id. art. 16(3), at 57.
be maintained for a given period could be based on those rules.148

Although the *Plantanol* case provides interesting guidance on the application of the principle of legitimate expectations to the withdrawal of support for low-carbon investments, its relevance for claims under investment arbitration must be considered with care. The threshold for violations of the principle of legal certainty and legitimate expectations under EU law can be considered to be higher than the threshold for breaches of fair and equitable treatment under international investment law. Market players have only rarely succeeded in convincing the Court of Justice that their expectations were eviscerated.149 This can be explained by the fact that the court often seems to require an explicit guarantee in the legislation that measures would be maintained unchanged.150 In contrast, arbitral tribunals, with the notorious exceptions of the awards in *Parkerings*151 and *AES*,152 usually do not require explicit stabilization guarantees to recognize the legitimacy of investors’ expectations.153 As mentioned before, legitimate expectations are protected under the fair and equitable treatment standard where states act to induce investments, and the resulting arrangements constitute crucial elements in reliance of which investors base their business case.154

Moreover, according to the *Tecmed* tribunal: “The investor also expects the State to use the legal instruments that govern the actions of the investor or the investment in conformity with the function usually assigned to such instruments.”155 The “function usually assigned” to support schemes for renewable

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energy and to JI schemes is to stimulate low-carbon investments by ensuring their financial viability. Substantial changes to these schemes that would make it impossible for the concerned installations to recover their investment costs and earn a reasonable profit would thus be incompatible with the fundamental function of these support instruments. Such changes should therefore, in most cases, be considered as an interference with investor expectations.

Wemaere and Streck argue that, as states seek to maintain regulatory discretion over the GHG emission credits they create, it appears necessary to protect investors against the “arbitrary confiscation or discounting of these rights.” They further state that “in the context of the implementation of JI projects, project participants may legitimately expect to receive an amount of ERUs corresponding to the verified emission reductions they generated” by their investment. By the same token, renewable energy investors can reasonably expect to benefit from the support scheme to which they were entitled at the moment of investing, for the period of time initially promised. National regulations may, to a certain extent, limit these expectations. These regulations cannot, however, be interpreted so as to totally nullify the rights of the investors that made their business decisions relying on the implementation of support schemes. Waiver clauses, especially when formulated in broad and vague terms, do not affect investors’ expectations to such an extent as to allow their total destruction.

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156. IEA, supra note 2, at 293.
157. See also Total, supra note 152, ¶ 313.
158. See Wemaere & Streck, supra note 79, at 53; see also Boute, supra note 79, at 113.
159. Boute, supra note 79, at 113; see Streck, supra note 25, at 118–19.
160. See Boute, supra note 79, at 127; see also DE JAGER & RATHMANN, supra note 44, at 15–32, 119; DEUTSCHE BANK CLIMATE CHANGE ADVISORS, supra note 133, at 11–12.
161. Boute, supra note 79, at 113; see Werksman, supra note 139, at 689–90; see also Restructuring the Community Framework Directive, supra note 141, art. 16, at 57.
162. Boute, supra note 79, at 113.
163. In Russia, for instance, O Porjadke Utverzhdenija I Proverki Hoda Realizacii Proektov, Osushhestvljaemykh v Sooetvstvii so Stat’ej 6 Kiotskogo Protokola k Ramochnoj Konvencii OON ob Izmnenii Klamata [Decree No. 332, Government of the Russian Federation, On the Procedure of Adopting and Monitoring the Development of Projects Implemented Under Article 6 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change], 24(e) SOBRANIE
D. National Treatment and Nondiscrimination

National treatment requires host states not to treat foreign investors less favorably than national investors who are in a comparable situation, unless such difference in treatment is reasonably justified by public interest objectives. The prohibition of discriminatory measures is not limited to discrimination on the basis of nationality, but applies to all types of difference in treatment. Could public interference with the right of foreign investors to benefit from support schemes for renewable energy or with their right to GHG emission credits constitute an unjustified difference in treatment? This question was at the heart of the Nykomb v. Latvia case.

Nykomb claimed that Latvia had violated the national treatment standard in the Energy Charter Treaty by refusing to honor a promise of support for low-carbon electricity production on the basis of which he made his investment. The tribunal accepted Nykomb’s discrimination claim and ordered Latvia to compensate his losses. Indeed, the tribunal observed that the administrator of the support scheme continued to support low-carbon installations operated by domestic investors, while refusing this payment to a foreign investor, Nykomb, operating in comparable conditions.


164. Boute, supra note 79, at 112.
165. See DOLZER & SCHREUER, supra note 10, at 179; Andrea K. Bjorklund, National Treatment, in STANDARDS OF INVESTMENT PROTECTION 27, 29 (August Reinisch ed., 2008).
166. See DOLZER & SCHREUER, supra note 10, at 176.
168. See id., ¶ 1.1.
169. See id., ¶ 4.3.2.
170. See id.
The outcome of the Nykomb case is of considerable importance for low-carbon investors. It illustrates the potential protection that investment arbitration might offer against illegitimate interference by the state with the financial and regulatory basis of investments. Indeed, the Nykomb case is about “bringing modern environmentally friendly and energy efficient...technology into an [obsolete] electricity industry.”\(^\text{171}\) It concerns a “green investor” that “finds his investment based on a commitment to pay a double tariff undermined because it is much cheaper for the state electricity monopoly to purchase imported electricity produced without any internalization of external costs.”\(^\text{172}\) The Nykomb award demonstrates that IIAs “create rights for investors against a host government for changing incentives and subsidies committed to a foreign investor...[IIAs] enable[...] a host state to make a credible and internationally enforceable promise about investment incentives and guarantees with respect to [low-carbon] energy investment.”\(^\text{173}\)

However, the protection of low-carbon investors under the national treatment standard suffers from one important limitation: states may not always change or withdraw support by targeting international investors, but may introduce measures that affect the support for all low-carbon investors, including national investors.\(^\text{174}\) In case of a general refusal to observe commitments of support, foreign investors could not rely on the national treatment standard by arguing that this measure “targeted Claimants’ investments specifically as foreign investments.”\(^\text{175}\)

E. Umbrella Clauses

Contractual relations are central to support schemes for renewable energy and domestic schemes for the implementation

\(^{171}\) Wälde & Hobér, supra note 136, at 102–03.

\(^{172}\) Id.

\(^{173}\) Sussman, supra note 9, at 402.

\(^{174}\) See Boute, supra note 14, at 362.

of the project-based mechanisms of the Kyoto Protocol. As mentioned above, these contracts concern the certification of renewable energy installations and their eligibility to benefit from support schemes. For JI and CDM projects, contractual relations concern the approval of projects by the host state (e.g. Letters of Approval). Contracts also govern the issuance and transfer of GHG emission rights.

Umbrella clauses, also known as sanctity of contracts clauses, in IIAs aim to guarantee by treaty the respect by the host state for the specific obligations it enters into with investors (the *pacta sunt servanda* principle). 176 Could low-carbon investors successfully invoke these clauses against breaches by the state of the contractual obligations made to facilitate the implementation of their investments? Arbitral tribunals and commentators are divided on the scope of umbrella clauses. These divisions reflect on the potential protection that these clauses might offer to low-carbon investors.

The most contentious issue relates to the nature of the obligations covered by these clauses. 177 Some tribunals have adopted a broad interpretation by considering that all contractual obligations are protected by umbrella clauses. 178 Others have refused to accord a broad scope to these clauses by introducing a distinction between the “state as a sovereign” (*acta jure imperii*) and the “state as a merchant” (*acta jure gestionis*). 179 On the basis of this distinction, tribunals have declined to grant


178. See, e.g., Noble Ventures, supra note 175, ¶ 51; Eureko, supra note 88, ¶¶ 246–48.

protection to an “ordinary commercial contract entered into by the State.” These tribunals have therefore limited the scope of umbrella clauses to additional investment protections contractually agreed by the state in an investment agreement.181

The promotion of renewable energy and the reduction of GHG emissions are objectives of public policy.182 The contracts that states sign with investors to stimulate this kind of investment are framed to pursue objectives of public interest.183 Arguably, Letters of Approval of JI and CDM projects—where states authorize the implementation of these GHG emission reduction projects—involve the “state as a sovereign” rather than “the state as a merchant.”184 Letters of Approval relate more to investment agreements than to ordinary commercial contracts.185 For JI projects, the host state takes the commitment to issue and transfer the ERUs to the investor’s account.186 A refusal by the state to transfer ERUs as agreed in a Letter of Approval or in other agreements made with the investors could thus amount to a breach of an umbrella clause.

A second point of debate concerns the application of the rules of attribution to umbrella clauses. In accordance with the rules of attribution, acts of separate entities are only attributable to the state if it is shown that these entities exercise “puissance publique (governmental authority) or acted on the instructions of, or under the direction or control of, the State in carrying out the conduct.”187 Is there a violation of the applicable IIA if a legal entity separate from the central state has breached a contractual obligation it had entered into with an investor?188

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181. See id.; see also *Pan American Energy*, supra note 179, ¶ 109.
183. See *Association of Issuing Bodies*, supra note 81, at 8. Agreements for the certification of renewable energy, for instance, pursue the public policy objective of renewable energy development by improving confidence in the green certificates mechanism and by ensuring the uniqueness of the certificates. *Id.*
184. But see *Ratliff*, supra note 35, at 390–91 (arguing that unilateral acts may be viewed as *acta jure gestionis*).
186. See id.
Some arbitral tribunals have been reluctant to apply the international rules of attribution to investment agreements. Other tribunals, such as the one in *Noble Ventures v. Romania*, have accepted that contractual breaches by a separate public entity can be attributed to the host state.

Support schemes for renewable energy are often administered by entities that are separate from the state. In the EU, for instance, Member States tend to charge independent entities (e.g. network operators) with the administration of support schemes in order to avoid qualification as state aid. Attribution to the state of contractual breaches by these separate entities will eventually depend on the influence that the central government exercised on the decision to breach the contract.

The attribution issue is more straightforward as it applies to JI projects. Indeed, although separate entities from the state, such as the Accredited Independent Entities, are involved in the approval of JI projects and in the monitoring of emissions, the main decisions are taken by the Focal Point and this is generally part of the state apparatus (often the Ministry of Energy or the Ministry of Environment). It is the Focal Point that will decide on the conversion of the national AAUs to ERUs.

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92, 101–02 (Christina Binder et al. eds., 2009); see also DOLZER & SCHREUER, supra note 10, at 161–62.


190. See Noble Ventures, supra note 175, ¶¶ 68–69.

191. According to the European Court of Justice, “only advantages granted directly or indirectly through State resources are to be considered aid.” PreussenElektra AG v. Schleswag AG, Case C-379/98, [2001] E.C.R. I-2099, ¶ 58.

192. See Baetens, supra note 63, at 688.


194. See Streck, supra note 25, at 118.
Focal Point that will decide on the transfer of the ERUs to the account of the project participants.195

A third issue is whether the scope of umbrella clauses is limited to investor–state contracts or if it extends to other investment-related promises made by the host state.196 Many arbitral tribunals accept a broad interpretation of the type of “obligations” covered by umbrella clauses.197 A broad interpretation will include commitments or promises made unilaterally by host states in their domestic legislation as being within the scope of umbrella clauses.198 However, not all legal obligations resulting from the domestic regulatory framework are protected under umbrella clauses.199 Arbitral tribunals generally require that the obligations “must have been assumed vis-à-vis the specific investment—not as a matter of the application of some legal obligation of a general character.”200

Promises of support are investor specific. They are made vis-à-vis investors in renewable energy sources or, in the context of JI projects, vis-à-vis investors in eligible GHG emission reduction projects.201 It is therefore arguable that violations of legally established commitments to support renewable energy or to issue ERUs to approved JI projects could amount to a breach of umbrella clauses.

F. Justification of Interference by Objectives of Public Policy?

The protection of an investor’s rights under international arbitration is not absolute. Arbitral practice generally

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195. Id.
197. See Schill, supra note 196, at 90.
198. See id.
199. See id.
201. See Streck, supra note 25, at 118–21.
acknowledges a host state’s sovereign right to regulate. Could host states successfully argue that the withdrawal or substantial modification of support for low-carbon investments is reasonably justified by objectives of public policy?

States could legitimately argue that they must have the right to adapt the level and duration of support to avoid overcompensating low-carbon investments. Overcompensation could occur following increases in the price of electricity or following the internalization of the carbon externality on the basis of a potential post-2012 international agreement on climate change.

However, states could also decide to withdraw or modify support schemes to reduce public debt or to decrease energy prices for consumers in advance of upcoming elections. This would have the effect of imposing the financial burden of climate policies on private investors. Under investment arbitration, could such short-term policy (or populist) objectives justify interference with low-carbon investors’ rights and expectations?

Assessing an investor’s claim under the fair and equitable treatment standard, the Saluka tribunal considered that:

No investor may reasonably expect that the circumstances prevailing at the time the investment is made remain totally unchanged. In order to determine whether frustration of the foreign investor’s expectations was justified and reasonable, the host State’s legitimate right subsequently to regulate domestic matters in the public interest must be taken into consideration as well.


204. See, e.g., Restructuring the Community Framework Directive, supra note 141, art. 16(3), at 57 (referring to overcompensation following changes in raw material prices).

In determining a breach of the fair and equitable treatment standard a tribunal is therefore required to weigh the investors’ legitimate and reasonable expectations against the legitimate regulatory interests of the host state.

This balancing or proportionality test is unlikely to affect the conclusion that substantial interference with the commitments that states have made to attract low-carbon investment violates the fair and equitable treatment standard. Indeed, an assessment of alleged breaches of the fair and equitable treatment standard will be more stringent where the regulatory change affects specific conditions that the host state offered to investors and where these conditions were determinant for the investment decision. In the words of the CMS tribunal:

It is not a question of whether the legal framework might need to be frozen as it can always evolve and be adapted to changing circumstances, but neither is it a question of whether the framework can be dispensed with altogether when specific commitments to the contrary have been made.

Arbitral tribunals also pay attention to public policy objectives in the assessment of alleged violations of the nondiscrimination standard. In Pope & Talbot, Inc. v. Canada, for instance, the tribunal highlighted, in the context of the comparison of foreign and domestic investors, that “[d]ifferences in treatment will presumptively violate [the national treatment obligation], unless they have a reasonable nexus to rational government policies.” Differences in treatment are thus justifiable if they pursue a public interest objective.

208. See CMS Gas Transmission, supra note 105, ¶¶ 274–75.
209. Id. ¶ 277.
In *Nykomb v. Latvia*, the tribunal decided that the host state had failed to justify on the basis of public policy why it refused to pay the promised support to the foreign investor, whilst continuing to support national investors.\(^{211}\) It appears extremely difficult for states to justify the necessity and proportionality of a change to a support scheme that would only affect foreign investors.\(^{212}\) However, states could more easily justify general changes that equally affect domestic and foreign investors. The public policy reasons that states could invoke are broad. According to the recent award in *AES*, even purely political actions taken to please the electorate in the context of upcoming elections could qualify as reasonable objectives.\(^{213}\) Based on current arbitral practice, states could thus refer to budgetary difficulties or consumer protection to legitimize the general withdrawal of support schemes under the non-discrimination standard.

A more controversial issue is to what extent host states’ right to regulate in the public interest (states’ “police powers”) must be taken into account in the assessment of regulatory measures under the expropriation standard.\(^{214}\) On the one hand, according to the “sole effect” doctrine, which is followed in certain awards, the effect of governmental action on the investment is the preponderant and sole factor in assessing whether there has been an expropriation.\(^{215}\) On the other hand, many tribunals recognize a host state’s “police powers,” and take them into account to justify the impact of these measures on foreign investments.\(^{216}\) According to the *Tecmed* tribunal: “There must be a reasonable relationship of proportionality between the charge or weight imposed to the foreign investor and the

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\(^{211}\) *Nykomb*, supra note 167, ¶ 4.3.2.

\(^{212}\) See id.

\(^{213}\) *AES*, supra note 152, ¶ 10.3.22.

\(^{214}\) See Fortier & Drymer, *supra* note 96, at 317.

\(^{215}\) Metalclad Corp. v. United Mex. States, ICSID Case No. ARB(AF)/97/1, Award, ¶ 103 (Aug. 30, 2000), 5 ICSID Rep. 212 (2002); *Compañía de Aguas del Aconquija*, *supra* note 77, ¶ 177; *Azurix*, *supra* note 189, ¶ 310.

aim sought to be realized by any expropriatory measure.” 217 In the application of the proportionality test, arbitral tribunals take into account investors’ legitimate expectations218 and the degree of deprivation imposed on investors’ rights. Measures that completely and permanently annihilate investors’ expectations and the economic value of their investment will rarely meet the proportionality and reasonability criterion.219 According to Thomas Waelde and Abba Kolo: “In the extreme case of complete and indefinite destruction of the economic value of property by otherwise fully legitimate regulation, and if individuals are required by regulation to make a special sacrifice in terms of their proprietary rights for the benefit of the society at large, compensation is . . . owed.” 220

As mentioned above, the creation of specific rights and expectations is central to support schemes for low-carbon investments. Withdrawing support could lead to the destruction of low-carbon investors’ rights and expectations to benefit from support. It could place most financial costs of renewable energy and GHG emission reduction policies on the private sector. If arbitral tribunals would agree to assess support schemes individually under the expropriation standard, it is arguable that the destruction of investors’ rights of support would fail the proportionality test and would therefore amount to an illegal expropriation.

G. Preliminary Assessment

Existing investment standards have, in theory, the potential to adequately protect investors in low-carbon projects against a state’s refusal to honor the promises of support that they have made to attract projects. In accordance with a certain arbitral practice, withdrawal of support could be qualified as “partial expropriation” of an investor’s regulatory and contractual

217. Técnicas Medioambientales Tecmed, supra note 97, ¶ 122; see LG&E Energy Corp., supra note 175, ¶ 195; Azurix, supra note 189, ¶ 311.


220. Id.
right(s) to receive the additional revenues that are necessary to enable the financial viability of their investments. Substantial changes to support schemes could amount to a violation of the fair and equitable treatment standard by frustrating an investor’s legitimate expectation to benefit from support. Attempts by states to impose the major costs of climate policies on foreign investors could be considered to be discriminatory. Moreover, umbrella clauses could provide additional guarantees against breaches of contractual or regulatory commitments made to facilitate low-carbon investments. If the impact on investors’ rights and expectations is sufficiently serious, states could hardly justify reneging on their promises of support by advancing public policy objectives, such as budgetary constraints or short-term economic harm.

Arbitral tribunals have, however, followed diverging interpretations of the existing investment standards. This divergence results firstly from different formulations of investment standards in the IIAs applicable to the dispute. It also can be explained by the importance of the specific circumstances in each case. More importantly, investment arbitration does not know a doctrine of precedent. In accordance with Article 53(1) of the ICSID Convention, an award is binding on the parties. Future arbitral tribunals can interpret the applicable IIA differently and apply it to the specific facts of the case according to their own appreciation. The result is a “trend of diverging—and sometimes conflicting—awards,” as well as a “lack of coherence, consistency and predictability.”

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222. On the importance of the circumstances of the case at hand, see Dolzer & Schreuer, supra note 10, at 128, and Fortier & Drymer, supra note 96, at 306.

223. The absence of a doctrine of precedent has been repeatedly confirmed by arbitral tribunals. For the relevant awards, see Christoph Schreuer, Diversity and Harmonization of Treaty Interpretation in Investment Arbitration, 3 Transnat’l Disp. MGMT. 1, 10–15 (2006), available at www.univie.ac.at/intlaw/pdf/cspubl_85.pdf.

224. Convention on the Settlement of Investment Disputes Between States and Nationals of Other States, supra note 64, art. 53(1).

225. See id.

226. IIA Issues Note No. 1, supra note 221, at 12; see World Investment Report 2010, supra note 137, at 137.
certainty that arbitral tribunals will follow an interpretative approach that will adequately protect them against public interference with the financial and regulatory basis of their investments. The limits of the protection offered by existing IIAs raise the question of the necessity to create a specific investment regime for low-carbon investments.

III. AN INVESTMENT REGIME FOR CLIMATE INVESTMENTS

Analysts have identified a negative correlation between a state’s potential for GHG emission reductions and the quality of their investment climate.227 In a comparative study on the attractiveness of different countries as hosts for JI projects, Samuel Fankhauser and Lucia Lavric consider that:

JI investors will face a clear trade-off between the scope for cheap JI on the one hand and the quality of JI institutions and the business environment on the other. The countries with the highest potential for cheap emission reductions also tend to be the countries with the most difficult investment climate.228

This negative correlation can be explained by the fact that investment instability and unpredictability would deter the inflow of capital and the transfer of technology necessary to modernize and thus reduce the carbon intensity of the economy. In contrast, countries with a stable investment environment would attract private investments to contribute towards the modernization and improved energy efficiency of the state’s economy.229 There are less so-called “low-hanging


229. See Fankhauser & Lavric, supra note 227, at 22 (arguing that “the countries with the worst investment climate will have attracted the lowest amount of (foreign or domestic) investment. Such investments generally increase resource efficiency and
fruits” in terms of energy efficiency improvements and GHG emission reductions in these stable economies.

Kati Kulovesi, arguing along the same line, highlights the positive effect that a stable and secure investment climate has on the attractiveness of a country from an investor’s perspective for the implementation of the project-based mechanisms of the Kyoto Protocol. Kulovesi considers that “[CDM and JI] projects tend to concentrate on the most advanced developed countries with conducive and secure investment environments.” These findings are supported by Sonja Peterson’s analysis, who determined that “[h]ost countries of CDM and JI projects are to date often those countries that also receive a significant proportion of total FDI flows.”

To improve the general investment climate for low-carbon investments, analysts have proposed the integration of investment protection rules in a post-2012 international agreement on climate change. Just like the Energy Charter Treaty, which aims to stimulate investments in the energy field by providing investment protection guarantees to private investors, the Kyoto Protocol could encompass an investment regime that would protect low-carbon investments against noncommercial risks.

The International Institute for Sustainable Development 

upgrade the capital stock: actions that usually lead to a reduction in greenhouse gas emissions”).

230. See id.

231. See Kulovesi, supra note 19, at 150.

232. Id.


236. See Rethinking Climate Change, supra note 234.
Sustainable Development ("IISD"), for instance, defended the view that:

The Kyoto Protocol . . . is an obvious candidate for the addition of investment rules designed to promote sustainable energy investment. IISD can foresee the climate change regime evolving, at least in part, into an investment regime, aimed at stimulating investment in technology renewal and industrial transformation with a view to reducing greenhouse gas emissions.\(^{237}\)

There are, however, nonnegligible barriers to the transformation of the Kyoto Protocol into a multilateral investment treaty. International climate negotiators are already confronted with the complex task of agreeing on the basic elements of a post-2012 regime, such as GHG emission cuts, monitoring procedures, and new financing mechanisms.\(^{238}\) According to Edna Sussman, "[a] suggestion that these negotiators also address is the issue of how to craft an acceptable multi-lateral investment treaty that is simply not practical."\(^{239}\) Instead, Sussman argues that:

[T]he ECT presents a readymade investment protection treaty already ratified by over fifty nations. It is this treaty that the developing nations should be urged to adopt as an important contribution on their part to arresting climate change, in the absence of GHG emission reduction caps binding on them.\(^{240}\)

It is true that many states characterized as having "low-hanging fruits" in terms of GHG emission reductions are not contracting parties to the Energy Charter Treaty. Russia, for instance, has an enormous potential for GHG emission reductions\(^ {241}\) and presents considerable opportunities for the

\(^{237}\). Id.
\(^{238}\). See Sussman, supra note 9, at 402–03.
\(^{239}\). Id.
\(^{240}\). Id.
development of renewable energy sources. It signed the Energy Charter Treaty, but refused to ratify it. Future climate change mitigation and renewable energy investments in Russia, therefore, are not protected under the Energy Charter Treaty. In line with Sussman’s argument, there can be no doubt that Russia’s ratification of the Energy Charter Treaty or a similar multilateral energy treaty would considerably improve the investment climate for low-carbon projects.

However, as Russia’s reluctance to endorse the Energy Charter Treaty illustrates, this treaty has proved to be particularly sensitive for energy-producing countries. Given relatively cheap access to energy resources, energy producers are often characterized by an energy and carbon intensity. These countries have an enormous potential for energy savings and GHG emission reductions. Advocating the adoption of the Energy Charter Treaty as a solution to the investment instability that affects low-carbon projects will therefore face resistance from some of the most relevant hosts of these projects.

More importantly, the Energy Charter Treaty and existing IIAs in general do not provide low-carbon investors with a clear and certain guarantee of protection against the risks of interference by the state with the financial and regulatory basis of their investments. As analyzed above, existing investment protection standards theoretically could shield low-carbon investors from regulatory changes or ex post public interventions that represent a real threat to the financial viability of their investments. However, given diverging interpretations amongst the arbitral tribunals, there can be no absolute guarantee that the conditions underpinning climate change mitigation investments will be honored.

244. Russia illustrates the fact that many energy producers often tend to be energy and carbon intensive. See ENERGY EFFICIENCY IN RUSSIA, supra note 241, at 68; see also Jonathan Stern, THE RUSSIAN GAS BALANCE TO 2015: DIFFICULT YEARS AHEAD, in RUSSIAN AND CIS GAS MARKETS AND THEIR IMPACT ON EUROPE 54, 75 (Simon Pirani ed., 2009).
Accordingly, there appears to be a need to assure low-carbon investors that arbitral tribunals will apply investment standards in a way that offers adequate protection against the specific risks that may affect their investments. The United Nations Conference on Trade and Development’s 2010 World Investment Report on Investing in a Low-Carbon Economy recommends: “Policy makers could devise IIA language that strengthens the role of IIAs in helping attract low-carbon foreign investment and encouraging the diffusion of relevant technology.” This could be done by fine-tuning the existing IIAs, for instance by means of common interpretative statements, or by integrating a specific low-carbon investment regime in a future international agreement on climate change.

The creation of such a specific low-carbon investment regime will not require the negotiators to develop new investment disciplines. To improve the stability of the investment climate for low-carbon projects, it would suffice to crystallize the interpretation applied by certain arbitral tribunals on existing investment standards that already provide considerable protection against the risks that characterize climate policies. This could be done in the following ways:

First, a low-carbon investment regime should officially endorse the qualification created by the *Eureko* tribunal of specific rights as “investments” that can be individually protected under international investment law. Given that under current market conditions the financial viability of low-carbon investments depends on public support, the right to receive this support constitutes “a key element of the investment, without which it appears that there would have been no investment at all.” This right has “some economic value.”

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247. *Id.*
that existed at the moment of investment should amount to measures tantamount to expropriation. Some support mechanisms, such as feed-in tariffs for renewable energy, might not be capable of “independent economic exploitation” because of the impossibility to sell these support mechanisms independently from the underlying electricity transaction.248 This could jeopardize the qualification of these rights as an individual investment and make it more difficult to rule that interference with this right constitutes an indirect expropriation. For this reason, the right to benefit from support for renewable energy and GHG emission reduction projects should be explicitly included in the definition of “investments” in IIAs. This definition could specify that low-carbon investments benefit from individual protection under the treaty, independently from the impact on the overall investment. The “unbundling” of property rights249 should be officially endorsed for low-carbon investments that base their business case on public support.

Second, a specific low-carbon investment regime should adopt the interpretation of the fair and equitable treatment standard outlined by the Tecmed tribunal. This interpretation states that host states must “use the legal instruments that govern the actions of the investor or the investment in conformity with the function usually assigned to such instruments.”250 Building further on this approach, the fair and equitable treatment standard should guarantee to investors that host states will apply the mechanisms that they developed to induce investments in conformity with the ordinary use of these mechanisms. Ex post interference with support mechanisms, which prevent companies that invested in reliance on them from recovering their costs, contradicts the “function usually assigned to” these support mechanisms.

250. Técnicas Medioambientales Tecmed, supra note 97, ¶ 154.
Third, in line with the arbitral award in *Noble Ventures*, the scope of umbrella clauses in a low-carbon investment regime should not be limited to contracts concluded by the central state, but should include undertakings made by separate public entities. Similarly, violations of the fair and equitable treatment standard by separate agencies should be attributable to the host state. Such a clarification of the application of the rules of attribution does not mean that the state would have to assume liability for every breach of “commercial” obligations by these separate entities. It would, however, ensure that, when regulatory tasks are delegated to separate entities, a violation by these entities of their obligations entails a violation of the investment treaty. Such a guarantee is particularly relevant in the context of the administration of support schemes for renewable energy. As illustrated by the European experience, states tend to delegate important regulatory tasks to separate entities in order to avoid the qualification of support schemes as state aid. By virtue of this delegation and of the nature of the delegated tasks, it can be said that these entities exercise sovereign competences. A violation of the undertakings taken on the basis of these competences should be attributable to the state.

IV. THE CLIMATE LAW—INVESTMENT LAW SYNERGY

The central importance of private investors to national and international climate change mitigation efforts necessitates the integration of their basic concerns in the regulatory initiatives developed to tackle climate change. The lack of internalization of the carbon externality is not the only obstacle to the development of low-carbon investments. The regulatory risks in the mechanisms that states create to internalize the carbon externality are as relevant to private investors. An efficient regulatory approach to climate change mitigation therefore must reflect and address investors’ concerns about regulatory stability and predictability.

Providing guarantees of regulatory stability and predictability is controversial because it involves a limitation of

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251. See *Noble Ventures*, supra note 175, ¶¶ 68–86.  
252. STERN, supra note 6, at 19.
states’ regulatory space. This limitation, by definition, is “a necessary corollary to the objective of creating an investment-friendly climate.”253 If states want to increase the credibility of their political commitments, they must accept being bound by them in the future.254

By signing and ratifying IIAs, states have recognized that regulatory stability and predictability influence investment decisions. They have accepted binding external constraints to attract foreign capital and technology. However, the limitation of states’ regulatory space is also one of the most contentious issues in the international investment law discipline. The literature repeatedly has stressed how binding investment obligations could affect a state’s regulatory space and policy liberty. Regarding climate change mitigation, commentators have warned that foreign investors in energy intensive installations could invoke investment protection standards against the implementation of national and international GHG emission reduction policies. They have criticized the effect of “regulatory chill” that investment arbitration would represent for states that intend to impose emission reductions, and have proposed ways to avoid investment arbitration clashing with climate policies.

The focus on the potential constraining effect of investment arbitration has taken attention away from the potential positive contribution that investment law could make to combat climate change. Analyses on the interaction between investment law and climate change mitigation have been limited by a vision of foreign investors as polluters that aim to take advantage of, and even abuse, basic “rule of law” guarantees. Obsessed with the popular “mythology of ‘green communities’ opposed by ‘greedy and environmentally lax’ investors,”255 analysts have largely ignored the fact that private capital and technology are indispensable to reorient the world economy towards more climate-friendly patterns.

255. Wälde & Hobér, supra note 136, at 103.
Investment arbitration, as an “externally supported committed device,” has the potential to neutralize the risks that characterize low-carbon investments. It provides the conceptual tools that are necessary to complement the existing income-based approach with a risk-based approach. By doing so, it can reinforce the credibility, and thus effectiveness, of national and international climate policies.

Climate law and investment law are complementary and mutually reinforcing. Both disciplines aim to promote investments by adopting a different approach. The fundamental objective of both is to attract private capital, especially of foreign origin, and to stimulate the transfer of technology to developing countries and economies in transition. To achieve this objective, climate law creates incentives to enable the financial viability of low-carbon investments. Investment law, on the other hand, aims to promote investment by protecting it against noncommercial risk.

The complementary character of climate and investment law is not limited to the fact that they both aim to promote investment. It also results from the comparable principles that have been developed under climate and investment law to attain this objective.

The principles of climate law and investment law are complementary first because of the central role of investors’ expectations in these two fields of law. Under climate law, support schemes for the promotion of low-carbon investments aim to attract investors on the basis of promises of support. States thus create expectations in reliance of which low-carbon investors commit capital and transfer technology. The international investment law principle of fair and equitable treatment, on the other hand, is directed at protecting foreign investors against eviscerations by states of the expectations they have created to attract investors. Climate law thus creates expectations, while investment law protects them.

Second, the principles of climate law and investment law are complementary in the creation and protection of property

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rights. On the one hand, support schemes for low-carbon investments entitle investors to additional financial revenues. These schemes create contractual and regulatory rights for investors to benefit from support during a certain period of time. On the other hand, the expropriation standard under international investment law protects investors against measures that destroy the economic value of investments, including contractual and regulatory rights.

Third, both climate law and investment law recognize contractual relations between the state and investors as the foundation of investment decisions. Under climate law, contractual rights are created to facilitate the investment process. Under investment law, contractual rights are protected against state interference in order to guarantee the stability of investment conditions.

Climate law and investment law are thus based on comparable principles that they approach from different perspectives. Climate law follows an income-based approach, while investment law adopts a risk-based focus. Climate law creates rights and expectations, while investment law aims to protect them. The creation and protection of investors’ expectations and rights can be seen as the logical corollary of the general objective of investment promotion that these two fields of law pursue. By providing a conceptual alternative to the current unilateral income-based approach in climate law, investment law has the potential to make a significant contribution to the national and international efforts at combating climate change.

IIAs, however, are not environmental treaties.\textsuperscript{257} They are part of the context of globalization and economic liberalization, and are thus not directly designed to stimulate low-carbon investments.\textsuperscript{258} According to Thomas Wälde, most existing IIAs

\textsuperscript{257} Peter Cameron considers, for instance, that “[t]he ECT is . . . almost explicitly not an environmental treaty and contains only a short provision on the subject in Article 19 and a separate protocol on energy efficiency.” Peter D. Cameron, International Energy Investment Law: The Pursuit of Stability 203 (2010).

\textsuperscript{258} As an exception, the Bilateral Investment Treaty between Japan and Switzerland explicitly refers to the promotion of energy efficiency and climate change mitigation in its preamble. See World Investment Report 2010, supra note 137, at 137.
focus on “traditional political risk.”\textsuperscript{259} They do not explicitly aim to address the specific risks that characterize low-carbon projects.

The Nykomb case has highlighted the potential relief that investment law might offer to a low-carbon investor who is confronted with a regulatory change affecting the financial basis of his project. It is, however, not sufficiently representative to support the general conclusion that investment standards in existing IIAs, as interpreted in the current arbitral practice, provide adequate protection against the risks that can affect low-carbon investments. In \textit{casu} the violation of investment law was particularly blatant. The host state withdrew the support scheme for the foreign investor, while it continued to support domestic players. Low-carbon investors might yet face much subtler state interference with the public support commitments that underpin their investment decisions. The protection that existing IIAs might offer in these cases is less evident. While the interpretation of investment standards, by some arbitral tribunals, could force states to honor their promises of support, other less favorable approaches cannot be excluded. In the absence of a doctrine of precedent, investment arbitration provides no certainty to low-carbon investors that the financial and regulatory basis of their investment will be respected.

However, it is precisely this certainty that is needed to facilitate the transition to a low-carbon economy. Existing interpretations that provide adequate protection to low-carbon investments therefore should be officially endorsed in IIAs, or be integrated in a specific investment regime for low-carbon investments.

\textbf{CONCLUSION}

Investment arbitration has the potential to considerably limit the instability that currently affects the implementation of climate change mitigation policies. By limiting regulatory risks—and thus risk premiums—for low-carbon investments, investment protection law can reduce the costs of the international GHG emission reduction efforts. The contribution

\textsuperscript{259} Thomas Wälde, \textit{Treaties and Regulatory Risk in Infrastructure Investment}, 34 J. WORLD TRADE 1, 14 (2000).
of investment arbitration to the improved regulatory certainty of low-carbon investments will, however, depend on the certainty of the arbitral process itself. The ongoing negotiations on the conclusion of a post-2012 international agreement on climate change provide a unique opportunity to address these investors’ concerns and create a special investment regime for low-carbon investments.