THE INVESTMENT TREATY ARBITRATION REVIEW

Seventh Edition

Editor
Barton Legum

THE LAWREVIEWS

THE INVESTMENT TREATY ARBITRATION REVIEW

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CONTENTS

PREFACE ix
Barton Legum

Part I Jurisdiction

Chapter 1 COVERED INVESTMENT 3
Can Yeğinsu and Calum Mulderrig

Chapter 2 COVERED INVESTORS 19
Laura P MacDonald and Ronan O'Reilly

Chapter 3 REQUIREMENTS OF RATIONE PERSONAE IN A GLOBAL ENVIRONMENT 31
Huawei Sun and Xingyu Wan

Chapter 4 INVESTOR-STATE MEDIATION 45
Fan Yang and Andrew Rigden Green

Part II Admissibility and Procedural Issues

Chapter 5 ADMISSIBILITY 59
Michael Nolan, Elitza Popova-Talty and Kamel Aitelaj

Chapter 6 BIFURCATION 70
Rebeca E Mosquera

Chapter 7 OBJECTION OF MANIFEST LACK OF LEGAL MERIT OF CLAIMS: ICSID ARBITRATION RULE 41(5) 82
Alvin Yeo, Koh Swee Yen and Monica W Y Chong

Chapter 8 PARALLEL PROCEEDINGS IN THE CONTEXT OF ISD ARBITRATION 100
Junsang Lee, Sungbum Lee, Jeongju Jahng and Myung-Ahn Kim

Chapter 9 PROVISIONAL MEASURES 109
Raëd Fathallah and Marina Weiss

Chapter 10 EVIDENCE AND PROOF 143
Martin Wiebecke

Chapter 11 EVOLUTION OF THE THIRD-PARTY FUNDER 150
Christiane Deniger, Paul Brumpton and Eileen Crowley

Chapter 12 CHALLENGES TO ARBITRATORS UNDER THE ICSID CONVENTION AND RULES 168
Chloe J Carswell and Lucy Winnington-Ingram

Chapter 13 MULTIPARTY CLAIMS 186
Jennifer Haworth McCandless and Angela Ting

Chapter 14 FRAUD AND CORRUPTION 199
Sandra De Vito Bieri and Liv Bahner

Part III Practical and Systemic Issues

Chapter 15 THE ROLE OF PRECEDENTS IN INVESTMENT TREATY ARBITRATION 211
David MacArthur, Aoi Inoue, Masahiro Yano and Tuo (Thomas) Huang

Chapter 16 TREATY INTERPRETATION IN INVESTMENT TREATY ARBITRATION 220
Tom Sprange QC, Viren Mascarenhas and Julian Ranetunge

Chapter 17 APPLICABLE LAW IN INVESTMENT TREATY ARBITRATION 231
Yun Jae Baek and Jae Hyong Woo

Chapter 18 RES JUDICATA 237
Junu Kim and Sejin Kim

Chapter 19 THE CHOICE OF SEAT IN INVESTMENT ARBITRATION 253
Evgeniya Rubinina

Chapter 20 ATTRIBUTION OF ACTS OR OMISSIONS TO THE STATE 276
Oleg Alyoshin, Olha Nosenko and Ivan Yavnych

Part IV Substantive Protections

Chapter 21 FAIR AND EQUITABLE TREATMENT 287
Andre Yeap SC, Kelvin Poon, Matthew Koh, David Isidore Tan, Daniel Ho, Dennis Saw, Jodi Siah and Timothy James Chong

Chapter 22 EXPROPRIATION 300
Qing Ren, Zheng Xu and Shuang Cheng

Chapter 23 MOST-FAVOURED NATION TREATMENT 310
Mariel Dimsey and Marina Kofman

Chapter 24 FULL PROTECTION AND SECURITY 321
Ning Fei, Xueyu Yang, Mariana Zhong and Zeyu Huang

Chapter 25 LEGAL DEFENCES TO CLAIMS 330
Eun Young Park, Matthew J Christensen, Hyungkeun Lee and Joonhak Choi

Chapter 26 POLITICAL RISK INSURANCE 338
Rishab Gupta and Niyati Gandhi

Part V Damages

Chapter 27 COMPENSATION FOR EXPROPRIATION 351
Konstantin Christie and Rodica Turtoi

Chapter 28 PRINCIPLES OF DAMAGES FOR VIOLATIONS OTHER THAN EXPROPRIATION 364
Ruxandra Ciupagea and Boaz Moselle

Chapter 29 THE DISCOUNTED CASH FLOW METHOD OF VALUING DAMAGES IN ARBITRATION 374
Richard Hern, Zuzana Janeckova and Tarek Badrakhan

Chapter 30 OTHER METHODS FOR VALUING DAMAGES IN ARBITRATION 385
Christian Jeffery

Chapter 31 CAUSATION 391
Anthony Theau-Laurent and Edmond Richards

Chapter 32 CONTRIBUTORY FAULT, MITIGATION AND OTHER DEFENCES TO DAMAGES 401
Chris Osborne, Dora Grunwald and Ömer Kama

Chapter 33 COUNTRY RISK 413
Dan Harris, Fabricio Nuñez and Ilinca Popescu

Chapter 34 CHOOSING THE APPROPRIATE VALUATION APPROACH FOR DAMAGES ASSESSMENT 423
Jessica Resch, Maja Glowka and Tim Giles

Part VI Post-Award Remedies

Chapter 35 ANNULMENT OF INVESTMENT ARBITRATION AWARDS 435
Claudia Benavides Galvis and María Angélica Burgos de la Ossa

Chapter 36 ENFORCEMENT OF AWARDS 445
Tom Sprange QC and Tom Childs

Part VII Multilateral Treaties

Chapter 37 ENERGY CHARTER TREATY 461
Patricia Nacimiento and Adilbek Tussupov

Chapter 38 NAFTA AND USMCA: CONTINUING THE SAGA 479
Martin F Gusy, Jadranka Jakovcic and Camille M Ng

Chapter 39 INVESTOR-STATE ARBITRATION AND THE 'NEXT GENERATION' OF INVESTMENT TREATIES 488
Olasupo Shasore SAN, Orji A Uka and Oluyori Ehimony

Chapter 40 THE COMPREHENSIVE AND PROGRESSIVE AGREEMENT FOR TRANS-PACIFIC PARTNERSHIP 502
Lars Markert and Shimpei Ishido

Part VIII Industries

Chapter 41 OIL: MEXICO'S RECENT REFORMS IN THE HYDROCARBONS SECTOR 517
Bernardo Sepúlveda Amor and Camilo Soto Crespo

Chapter 42 EXPERT ROLE IN CAUSATION ANALYSIS FOR ENERGY TRANSITION-RELATED ARBITRATION 526
Christopher J Goncalves and Alayna Tria

Chapter 43 INVESTMENT TREATY DISPUTES IN THE LIFE SCIENCES INDUSTRY 535
Gregory K Bell, Justin K Ho and Andrew Tepperman

Chapter 44 TRANSPORTATION ARBITRATIONS AND COMPLEXITIES IN ESTIMATING DAMAGES 544
Richard Caldwell, Andy Ricover, Lucia Bazzucchi and Emily Murphy

Appendices

Appendix 1 ABOUT THE AUTHORS 557
Appendix 2 CONTRIBUTORS' CONTACT DETAILS 593

PREFACE

This year's edition of *The Investment Treaty Arbitration Review* boasts a number of new chapters. The result is greater coverage and a resource that is even more useful to practitioners.

As before, this new edition provides an up-to-date panorama of the field. This is no small feat given the constant flow of new awards, decisions and other developments in the field of investment treaty arbitration.

Many useful treatises on investment treaty arbitration have been written. The relentless rate of change in the field rapidly leaves them out of date.

In this environment of constant change, *The Investment Treaty Arbitration Review* fulfils an essential function. Updated every year, it provides a current perspective on a quickly evolving topic. Organised by topic rather than by jurisdiction, it allows readers to access rapidly not only the most recent developments on a given subject, but also the debate that led to those developments and the context behind them.

This seventh edition represents an important achievement in the field of investment treaty arbitration. I thank the contributors for their fine work in developing the content for this volume.

Barton Legum
Honlet Legum Arbitration
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Part VIII

INDUSTRIES

Chapter 42

EXPERT ROLE IN CAUSATION ANALYSIS FOR ENERGY TRANSITION-RELATED ARBITRATION

Christopher J Goncalves and Alayna Tria[1]

I INTRODUCTION

In this chapter, we evaluate the importance of causation in investment arbitration for the energy sector and the critical roles of industry and quantum experts in causation analysis. This includes expert assessment of the policy and regulatory causes of the alleged harm and isolation of these factors from ongoing market and economic changes that are unrelated to the alleged violations. We evaluate the two critical steps of causation analysis: first, evaluating whether or not the alleged breaches or violations are connected to the claimed harm, and second, assessing whether or not the harm has caused the claimant to suffer damage. We then assess recent examples from climate change-related investment arbitrations to illustrate these concepts. We conclude with observations regarding the increased importance of expert causation analysis as a result of investment arbitrations wrought of climate change policy and the energy transition.

II ENERGY SECTOR ARBITRATION

Historically, energy sector disputes have dominated investment treaty arbitrations both in terms of claim volume and the amount of claimed damages. Of the 869 cases registered at ICSID since 1972,[2] 25 per cent have been arbitrations within the oil, gas and mining sector and 17 per cent have been arbitrations within the electric power and other energy sector.[3] Additionally, arbitrations filed under the Energy Charter Treaty (ECT) have grown from 5 per cent of all International Centre for Settlement of Investment Disputes (ICSID) cases in 2009 to 9 per cent in 2021.[4]

The claimed amounts in investor-state energy sector arbitrations have also vastly exceeded that of other industry segments. With a total of more than US$27 billion claimed

1 Christopher J Goncalves is a managing director and Alayna Tria is an associate director at Berkeley Research Group, LLC (BRG). The authors would like to thank Mark Jordan, a consultant with BRG, and Rebecca Yim, an associate with BRG, for their research assistance on this chapter.

2 Between 1972 and 31 December 2021, ICSID registered 869 cases under the ICSID Convention and Additional Facility Rules. See ICSID, *The ICSID Caseload – Statistics*, Issue 2022-1, p. 7.

3 ICSID, *The ICSID Caseload – Statistics*, Issue 2022-1, p. 12.

4 ICSID, *The ICSID Caseload - Statistics*, Issue 2010-1, p. 10. ICSID, *The ICSID Caseload - Statistics*, Issue 2022-1, p. 11.

in damages between 2000 and 2017, the energy sector dwarfs the next highest industry segment – mining – at US$13 billion in claimed amounts, with other industry segments ranging from US$1.2 billion to US$2.8 billion during the same period.[5]

It is not surprising that energy sector disputes have featured prominently within investment arbitration given the extent of private and cross-border investment in this highly capital-intensive industry. For liberalised energy markets in the United States, United Kingdom and European Union, increased market competition has opened the floodgates for private investment in the power sector. For example, investor-owned utilities served 72 per cent of US electricity customers in 2017.[6] While emerging markets may continue to be only partially liberalised or may still retain state-owned or monopolistic structures, they also rely on foreign direct investment to meet critical energy infrastructure needs. Investment claims have proliferated (and will probably continue to do so) under bilateral treaties, multilateral treaties like the ECT and other free trade agreements (FTAs) as emerging markets have wrestled with various forms of market liberalisation as well as policy retrenchment.

Looking forward, we expect a tidal wave of investment disputes as a result of changes in energy policy, the geopolitical environment and energy markets. US domestic litigation cases regarding climate change and greenhouse gas (GHG) emissions have grown by 17 per cent during the past two decades[7] and may portend a similar trend towards increased disputes activity at the international level. Additionally, Europe's accelerated transition away from Russian natural gas in response to Russia's invasion of Ukraine in 2022 could also lead to a surge in investment dispute claims.[8] For instance, Germany's decision to halt the certification of Nord Stream 2 in response to Russian hostilities has raised the possibility that Nord Stream 2 AG, a Swiss subsidiary of Gazprom responsible for the pipeline's operation, may seek compensation from Germany under the ECT.

As climate change imperatives and policies intensify and the energy transition gains momentum, the development and deployment of renewable energy and clean-fuel technologies will require massive additional investment in new infrastructure and the decommissioning or conversion of older GHG-intensive infrastructure, with recent research estimating that the global cost of the energy transition for all economic sectors will reach between US$73 trillion and US$173 trillion by 2050.[9] As governments begin to enact energy transition policies to reduce carbon emissions, phase out fossil fuel generation and implement or modify incentives for investment in renewable energy, this may provide fertile ground for investment disputes by raising questions of fair and equitable treatment (FET), most-favoured nation treatment, indirect expropriation and diminution in the value of existing assets.

---

5 Credibility International, *Study of Damages Awards in Investor-State Cases* (2nd edn, Jan. 2021), p. 21. The US$27 billion for the energy sector excludes two outlier cases: *Yukos v. Russia* and *Conoco v. Venezuela*, which had a combined claim amount of US$144 billion. If these cases had been included, total claimed damages for energy sector investor-state arbitrations between 2000 and 2017 would equal nearly US$172 billion.

6 US Energy Information Administration, 'Investor-owned utilities served 72% of U.S. electricity customers in 2017', *Today in Energy* (15 Aug. 2019).

7 BRG analysis.

8 K Abnett, 'EU rolls out plan to cut Russia gas dependency this year', *Reuters* (8 Mar. 2022).

9 Mark Z Jacobson, et al., 2019, 'Impacts of Green New Deal Energy Plans on Grid Stability, Costs, Jobs, Health, and Climate in 143 Countries', *One Earth* Vol. 1, Issue 4, 449–63 (20 Dec. 2019), https://doi.org/10.1016/j.oneear.2019.12.003. BloombergNEF, New Energy Outlook 2021 (Jul. 2021), https://about.bnef.com/new-energy-outlook/ (web pages last accessed 22 Mar. 2022).

Although energy investments and commodities are highly subject to both state policy and regulatory actions, they are also influenced by global market developments. As demonstrated during the height of the covid-19 pandemic in 2020 and most recently in response to the Russian invasion of Ukraine, fluctuations in global oil and natural gas prices can send tidal waves through national and regional markets, either destroying market and investor sentiment and sending project economics nose-diving into negative territory or skyrocketing to record heights and even bringing previously uneconomical projects back into play. Therefore, because investment claims are often complex and multi-faceted with market, policy and regulatory elements at play, a critical challenge that often arises in international investment arbitration is the isolation of the causal effects of these factors on the alleged harm to an investor as well as the determination of whether and how that harm directly causes the alleged damage. We refer to these together as 'causation analysis'.

III THE EXPERT'S ROLE IN EVALUATING CAUSATION

Causation refers to the tribunal's imperative to assess whether the alleged breach has actually caused the alleged harm suffered by an investor and is considered the necessary 'bridge' between the violations and damages.[10] Or, in other words, 'causation analysis helps to disentangle the losses caused by the wrongful act and de-attribute loss caused by other factors'.[11]

Causation analysis involves evaluation of the link between the breaches and the harm (often assigned to the industry expert) or between the harm and the amount of damages (often requested of the quantum expert), which may be evaluated separately or in combination. However, in our experience, many claimants, respondents and experts do not carefully evaluate both steps in a coherent fashion, or they skip causation altogether, based on legal instruction or implicit assumptions that both links are true. Sometimes this is the result of intentional legal instruction and strategy, such as may be the case for counsel who do not wish for a quantum expert to become entangled on the merits of a case. Occasionally, however, lack of causation analysis may be the result of expert oversight. In such a circumstance, the tribunal may not have the tools needed to properly evaluate the actual cause of harm and amount of damages claimed by the investor.

In our experience, the first step of causation analysis is commonly omitted. In this case, a claimant might convincingly establish that it has suffered loss but fails to prove that the loss was indeed caused by the alleged breach rather than by one or more unrelated market and economic factors, the actions of the claimant itself or third parties with no connection to the host state.[12]

10 Patrick W Pearsall and J Benton Heath, 'Causation and Injury in Investor-State Arbitration', *Contemporary and Emerging Issues on the Law of Damages and Valuation in International Investment Arbitration*, 2018.

11 Wolfgang Alschner, 'Aligning Loss and Liability – Towards an Integrated Assessment of Damages in Investment Arbitration' (24 Feb. 2015) in Theresa Carpenter, Marion Jansen and Joost Pauwelyn (eds), *The Use of Economics in International Trade Disputes: Lessons Learned and Challenges Ahead*, Forthcoming, available at SSRN, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2569426 (last accessed 22 Mar. 2022).

12 Pearsall and Heath (op. cit. note 10, above), p. 1: '[F]or the respondent, causation is key to enforcing what it perceives to be the limits on investment treaty obligations, ensuring that States are not held liable for the attenuated economic ripple effects of a generally application regulation, or for the independent actions of the claimant or third parties.'

Alternatively, by skipping the second step of causation, a claimant might fail to precisely analyse or link the investor's claimed damages for the alleged harm or breaches.[13] In this instance, the claimant's quantum expert might focus on the quantification of damages in a vacuum, leading to a situation in which the damages are detached from the breaches determined in the merits phase of a case and reducing damages calculations to a valuation exercise.[14] This may leave the tribunal without a solid evidentiary base on which to evaluate the causal links. In other circumstances, and sometimes as the result of specific legal strategy or instruction, an expert may lump together the damage caused by each individual breach in a case with multiple established breaches, but this too may provide limited assistance to a tribunal considering whether to award damages for only some of the alleged breaches.

Indeed, causation analysis presents a formidable challenge to legal counsel and arbitrators alike because investment value is never driven by a single factor. Particularly within the energy sector, asset value is driven not just by levers controlled by the host state, such as policy, regulation and fiscal terms, but also by a multitude of national and international market factors, such as supply, demand, pricing, access to capital and so forth.

Practitioners often describe causation analysis as having both 'factual' and 'legal' elements,[15] and observe that 'factual causation is one of the areas where the cooperation between lawyers and economists can be most fruitful'.[16] We heartily agree with this statement.

a Factual causation concerns the question of whether or not the alleged harm would have occurred but for the alleged wrongful conduct. Here, the tribunal typically must decide whether the host state's alleged breach caused the investor's loss and, if so, whether it did so in full or only in part (i.e., to the extent that there were exogenous factors at play). Industry and quantum experts can play a fundamental role in assessing factual causation.

b Legal causation evaluates whether the investor's alleged harm is 'too remote' from (or 'not proximate' to) the alleged breach as well as issues of foreseeability.[17] These topics are typically the exclusive remit of legal counsel.

13 This notably occurred in *Victor Pey Casado and Foundation Presidente Allende v. The Republic of Chile* (ICSID Case No. ARB/98/2), in which the tribunal did not make an award of damages because 'the Claimants have failed to prove any material injury caused to either of them as the sufficiently direct result of the Respondent's breach of Article 4 of the BIT'. Rather, the tribunal noted that the claimants 'focused their submissions on the evaluation of damage, without undertaking the prior step of showing the precise nature of the injury, causation, and damage itself'. See ICSID Case No. ARB/98/2, Award (13 Sep. 2016), paras. 232 and 234.

14 Alschner (op. cit. note 11, above), pp. 6, 8. Alschner also notes that, '[e]specially in cases where the investment has been made worthless, it is tempting to match the amount of damages awarded with the value of the asset as if a formal expropriation had taken place . . . [A]lthough tribunals carefully differentiate in their legal analysis between expropriation and a violation of fair and equitable treatment (FET), they typically award the same amount of damages equivalent to the full market value of the investment at the damage stage'.

15 Alschner (op. cit. note 11, above), p. 18; Pearsall and Heath (op. cit. note 10, above), p. 10. Also see Ilias Plakokefalos, 'Causation in the Law of State Responsibility and the Problem of Overdetermination: In Search of Clarity', *European Journal of International Law,* Vol. 26, No. 2 (2015), p. 475.

16 Alschner (op. cit. note 11, above), p. 18.

17 Pearsall and Heath (op. cit. note 10, above), p. 11.

Energy sector arbitrations often require and benefit from expert elucidation of the market, economic, industry, regulatory and technical drivers of value – often the remit of the 'industry expert', whose role can be essential in isolating the effect of the breaches on asset value from value drivers not connected to the state's behaviour. To accurately quantify damages, the quantum expert must evaluate the link between the harm and the claimed sums by carefully constructing and assessing the 'but for' (or 'counterfactual') scenario. The counterfactual must remove the breaches but not the effects of exogenous value drivers, such as general economic or market trends.

Whereas industry experts must consider how to test and isolate the harmful effect of the alleged breach on investment value, quantum experts must possess deep and cross-functional understanding of how damages flow directly from the cause of harm. Because it is critical that industry and quantum expert analyses are fully aligned and integrated both with each other and with the facts and legal theory of the case, it is often effective when industry and quantum expertise on causation are embodied within the same expert or expert team.

Finally, in our experience, experts are best deployed in the early stages of arbitration to assist legal counsel in holistically assessing the merits of the claim (pre-dispute analysis) and working in tandem with legal counsel to ensure that the commercial, economic and market aspects of the claim line up with the legal requirements for the analysis of causes of harm and damage.

IV CAUSATION IN ENERGY TRANSITION-RELATED ARBITRATION

We expect that the connection between assessing the causation of harm and the quantum of damages will become ever more relevant in the context of energy disputes in the years to come as investor-state arbitrations increasingly arise because of regulatory and political developments regarding climate change. Urgent action on climate change at both the national and regional levels charts a course towards full decarbonisation of many global economies by 2050 with substantial milestones in the interim; notably, net-zero power sector emissions by 2035 under the Biden administration's ambitious climate change agenda and, under the European Union's Green Deal, a reduction of carbon emissions of 55 per cent below 1990 levels by 2030.

The government-mandated phasing out of fossil fuels and energy infrastructure with heavy carbon dioxide emissions runs the risk of creating substantial stranded assets in the energy sector. For example, in the power sector, the state-mandated phasing out of coal-fired and oil-fired power generation has created, and will probably continue to create, power generation assets that are either underutilised or economically unviable well before the end of their economic life, such that investors are no longer able to earn an economic return on their investment.

Approximately 70 per cent of global coal-fired generation capacity is more than 10 years old[18] and it is these units that will face the greatest and most imminent risk of stranding because of lower efficiency and higher emissions rates. Much of the world's coal generation capacity is concentrated within Organisation for Economic Co-operation and Development countries with not only aggressive decarbonisation policies but also robust protections for foreign investment (i.e., bilateral investment treaties, FTAs and multilateral treaties). Similarly, there is significant risk of stranding for upstream and midstream assets

18 BRG analysis.

in oil (and, to a lesser extent, gas) because there is a mounting consensus among multilateral agencies and academic and industry leaders that meeting 2050 climate targets requires forgoing extraction of most proved fossil fuel reserves. The upstream producers of these reserves and their midstream transporters stand to lose a great deal if policies prevent them from operating at levels sufficient to generate a satisfactory return for lenders and other stakeholders. Estimates in 2017 suggested the value of upstream stranded assets could be up to US$7 trillion.[19]

There is evidence to suggest that the energy transition is increasingly being driven by favourable renewable energy economics, which are now on course to outcompete fossil fuels on their own merits, rather than by policy alone. In some regions, the cost of clean energy, even without subsidies, has declined to the point where utility-scale solar and onshore wind generation produce electricity for prices that beat even the lowest-cost coal-fired generation,[20] and there continue to be vast improvements in the technological efficiency and scalability of renewable energy generation as well as battery storage technology. The recent economic momentum away from fossil fuels and towards clean energy sources will only be accelerated and massified by the growing array of national and multinational policy initiatives that aim to achieve net-zero economies within the coming few decades.

Most recently, the Russian invasion of Ukraine has added to the urgency with which European countries transition to renewable energy and clean fuels as they seek to achieve energy independence from Russia. In December 2021, Russia supplied Germany with 32 per cent of its total natural gas supply which, in turn, produces 15 per cent of Germany's electricity and heats half of Germany's homes.[21] Germany now plans to generate 100 per cent of its electricity from renewable sources by 2035, which represents a 15-year acceleration of its prior timeline.

For these reasons, we expect that investment arbitrations centred around the reduced economic viability of fossil fuel reserves, processing, transportation and storage infrastructure, and power generation are poised to become increasingly common as the energy transition accelerates. We further expect that causation will become a particularly salient point for fair and equitable treatment and indirect expropriation claims of assets with extremely long useful lives, as is almost always the case for energy sector investments. Indeed, coal-fired power plants have a median lifespan of 32 years.[22] Because fossil fuel assets may face significant market and economic headwinds during their useful life that could impair their economic value – even but for the state's alleged breaches – expert causation analysis may consequently become a critical issue in these claims.

In other words, in cases where a claimant alleges lost revenues or lost profits for a stranded asset, and the assumed useful life of that asset extends well into the future, the counterfactual cash-flow performance of that asset must be evaluated in the context of the ongoing energy transition to avoid overcompensating investors and penalising states for actions outside their control. Indeed, investment disputes arising as a result of state environmental protection

19 International Renewable Energy Agency, 'Stranded Assets and Renewables: How the energy transition affects the value of energy reserves, buildings and capital stock' (Jul. 2017).

20 Christopher Goncalves, Matt Tanner, Alayna Tria and Tristan Van Kote, 'From Resource Scarcity to Energy Abundance and Infinite Supply', *Transition Economist* (Jan. 2021).

21 Vera Eckert and Kate Abnett, 'Factbox: How dependent is Germany on Russian gas?' *Reuters* (8 Mar. 2022).

22 Steven J Davis and Robert H Socolow, 'Commitment accounting of CO_2 emissions', *Environmental Research Letters*, 9, 084018 (2014).

and climate change measures are already emerging in both Europe and North America, respectively, under the ECT and the North American Free Trade Agreement (NAFTA), which was replaced as of July 2020 by the United States–Mexico–Canada Agreement. Although most of these cases are still pending and at an early stage, there are claim elements regarding the projection of future asset performance in which the effect on asset value of increasingly unfavourable economic headwinds is intertwined with the alleged breaches themselves.

For example, in 2009, Swedish energy utility Vattenfall submitted an arbitration claim under the ECT against Germany, claiming harm from environmental restrictions imposed on a coal-fired power plant constructed near the Elbe River. Vattenfall claimed that the strict environmental standards imposed by the government in its final construction permit, which governed the plant's impact on the nearby river, went beyond the environmental restrictions in the plant's preliminary construction permit.[23] Specifically, the state restricted the amount of the cooling water that could be used by the power plant, which would, in turn, require the plant to scale back its operations, which Vattenfall argued would make the coal plant impractical and uneconomical, leading to an initial damages claim of €1.4 billion.[24] The case settled on confidential terms in 2010.

In *Westmoreland v. Canada*, the US coal mining company Westmoreland filed a NAFTA claim in 2018 against Canada as a result of alleged discrimination following Alberta's decision to phase out coal in power generation by 2030. Westmoreland alleged that the province of Alberta paid nearly C$1.4 billion to three Albertan coal-consuming power utilities as compensation for the phasing out but nothing to Westmoreland, which supplies coal to the majority of the phased-out power plants and purchased its coal mines in 2013–2014 on the expectation that they would have a 50-year lifespan.[25] As a result, Westmoreland has claimed nearly US$441 million in revenue that it otherwise expected to earn as a result of the phasing out, a claim that was ultimately dismissed owing to lack of standing.[26]

Two almost identical ECT claims have arisen against the Netherlands: one was filed in February 2021 (*RWE v. Netherlands*) and the other was filed in April 2021 (*Uniper v. Netherlands*). As a German investor in two Dutch coal-fired power plants, RWE has claimed for compensation of the financial impact wrought by Dutch legislation that will phase out the use of coal in the country's electricity production by 2030 as part of efforts to meet

23 Nathalie Bernasconi, International Institute for Sustainable Development (IISD), 'Background Paper on Vattenfall v. Germany Arbitration' (Jul. 2009), pp. 1–2.

24 'Vattenfall Settles Dispute with Germany', *Global Arbitration Review* (27 Aug. 2010); Nathalie Bernasconi (op. cit. note 23, above), pp. 1–2; *Vattenfall v. Germany (I)*, Investment Dispute Settlement Navigator.

25 *Westmoreland Mining Holdings LLC v. Government of Canada*, Notice of Arbitration and Statement of Claim (12 Aug. 2019), paras 31, 79.

26 *Westmoreland Mining Holdings LLC v. Government of Canada*, Notice of Arbitration and Statement of Claim (12 Aug. 2019), para. 86. The 'lack of standing' decision was based on the tribunal's determination that (1) Westmoreland was not a protected investor at the time of the alleged breaches as required by NAFTA Articles 1116(1) and 1117(1), (2) Westmoreland had not made a prima facie damages claim under the same NAFTA Articles, and (3) the challenged measures did not relate to Westmoreland or its investment pursuant to NAFTA Article 1101(1). *Westmoreland Mining Holdings LLC v. Government of Canada*, Final Award (31 Jan. 2022), para. 252.

targets under the Paris Agreement.[27] Uniper has filed a similar arbitration regarding its Dutch coal-fired plant, which was expected to have a lifespan of 40 years but would need to be prematurely retired or converted to run on alternative fuel fewer than 15 years after opening.[28]

Causation has figured largely in climate change-related cases arising from the withdrawal of investment incentives and other regulatory changes for renewable energy. As part of their climate change strategies, several states have adopted renewable energy incentivisation schemes, such as feed-in tariffs (FITs) whereby the state commits to buying power generated through renewables for a certain period (25 years or possibly longer) at a fixed rate, regardless of the actual market price.[29] Although these programmes were successful at attracting foreign investment in renewables, as states have amended or terminated these programmes, there has been an upsurge in renewable energy investment arbitration. As at 2019, more than 40 cases concerning renewable energy had been brought by investors against states under the ECT, many of which are levied against Spain, the Czech Republic and Italy.[30]

Although many of these cases remain pending, legal scholars note that, of the awards that have been issued, causation has proven to be at least partly determinative of the outcome of the case:

> *[I]f an investor's profitability has remained unaffected, if its losses are not significant, or if they are, but no causal link with the changed policy is demonstrated, the investor is likely to lose its case. The reverse is true when the regulatory changes have destroyed the value of the investment or causes a substantial deprivation.*[31]

For example, in *Blusun v. Italy*, under which solar power investors claimed that the state's reduction in FITs had effectively expropriated their investment, the tribunal ultimately ruled that the claimants had not discharged their burden of proof by establishing that 'the Italian state's measures were the operative cause of the . . . Project's failure'.[32] On the contrary, the tribunal held that even if some or all the state's actions constituted breaches of the ECT, if they did not cause the failure of the project, then the claimants were not entitled to recover damages.[33]

V CONCLUSION

As the energy transition gains global momentum, states enact or revise national climate change strategies and policies, and ageing and inefficient infrastructure is decommissioned or retired, we anticipate that energy arbitration will continue to grow significantly. Climate

27 'Netherlands Faces First ICSID Claim Over Coal Plant Ban', *Global Arbitration Review* (3 Feb. 2021).

28 Megan Darby, 'Coal Generator Uses Investment Treaty to Fight Netherlands Coal Phaseout', *Climate Change News* (21 May 2020).

29 Freya Baetens, 'Combating climate change through the promotion of green investment: from Kyoto to Paris without regime specific dispute settlement' in K Miles (ed.), *Research Handbook on Environment and Investment Law* (Edward Elgar, 2019).

30 Baetens (op. cit. note 29, above), p. 20.

31 ibid., pp. 20, 22–23.

32 *Blusun SA, Jean-Pierre Lecorcier and Michael Stein v. Italy*, ICSID Case No. ARB/14/03, Award (27 Dec. 2016), para. 394.

33 ibid., para. 375.

change and energy transition-related investment disputes contain complex issues concerning both the passage or revision of climate change and energy transition policies and regulations as well as broader market and economic trends, such as:

a falling capital and operating costs of renewables;
b lower borrowing costs for renewables and clean energy;
c investors' rising environmental, social and governance standards;
d reduced funding and higher borrowing costs for fossil fuel projects;
e falling natural gas production costs (i.e., as a result of ample US shale gas); and
f heightened technical efficiency for gas-fired generators (i.e., for combined cycle gas turbines) and other clean fuel technologies.

As such, we expect that a formidable task in forthcoming energy sector arbitrations will require isolating the effect of these broader economic factors that are not attributable to the state from the harm caused by state-led policy, regulatory or fiscal actions that form the crux of the alleged breaches. If harm can indeed be linked to the alleged breach, experts may assist the tribunal by determining whether the harm from the alleged breach can be isolated and quantified separately from unrelated economic, commercial or financial causes of harm (i.e., broader macroeconomic and market trends). When both steps of causation analysis are required, it is often effective to seamlessly align and integrate industry and damages expertise on causation within the same expert or expert team.

These are likely to become the critical issues that experts can help tribunals to evaluate and understand when deciding causal issues for investment disputes regarding climate change and energy transition policies. The experts and legal counsel who can master these issues and challenges will be best positioned to help tribunals to accurately analyse and thoroughly understand increasingly complex issues of liability, causation and damages.

Appendix 1

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