

When Decarbonization Meets Industrialization: The First WTO Dispute Between the EU and U.K.

MANDY MENG FANG*

In March 2022, the European Union challenged the United Kingdom's Contracts for Difference (CfD) scheme at the World Trade Organization (WTO). This case—United Kingdom – Measures Relating to the Allocation of Contracts for Difference in Low Carbon Energy Generation (UK – CfD (EU))—is notable, as it marks the first post-Brexit dispute brought by the EU against the United Kingdom. The core of the EU's challenge was the nature of the financial incentives the CfD scheme provides for renewable energy developers; the EU accused the United Kingdom of breaching the WTO's national treatment obligation by applying discriminatory local content requirements as an evaluation criterion for awarding subsidies to offshore wind energy projects. Perhaps to the surprise of many, the United Kingdom agreed at the consultation stage to exclude the challenged local content requirements from the CfD scheme, thus bypassing the chance to contest the EU claim in a WTO panel.

As the latest in an expanding body of WTO disputes concerning the renewable energy sector, the UK – CfD (EU) dispute centers on measures that blend decarbonization ambitions with industrial strategies. Such measures, which are now commonplace in many renewable energy producer countries, typically aim to promote the deployment of renewable energy to decarbonize the economy while achieving broader development objectives, including advancing economic objectives from spurring job growth to strengthening local supply chains. Whether WTO rules have been contravened depends on how decarbonization and industrialization goals are integrated into a trade-related renewable energy policy measure.

Although settled prior to the panel stage, the UK – CfD (EU) dispute raises several intriguing questions which touch upon the interplay between trade, politics, and environmental policies. The dispute also provides an opportunity to re-evaluate the policy space available in the multilateral trading system for the industrial efforts of countries to advance the transition to a low-carbon energy economy. This Article deploys legal and policy perspectives to highlight and analyse the issues raised in UK – CfD (EU) relating to the intersection of international trade regulation, decarbonization, and industrialization.

* Assistant Professor, School of Law, City University of Hong Kong, email: mengfang@cityu.edu.hk. The author is grateful for the comments provided by Marc Busch and Simon Lester, and the editing efforts of the *Virginia Journal of International Law* editors. All errors remain her own.

In the process, the Article seeks to address several important questions, including why the EU brought the legal challenge to the WTO as opposed to using the EU–U.K. Trade and Cooperation Agreement (TCA); why the EU focused its claim on just one legal issue; why the United Kingdom agreed to a mutually agreeable solution that abandoned the disputed measure; and whether the United Kingdom would likely have been successful if the dispute had proceeded to the panel stage. Moreover, the Article addresses the broader issue of how Members can advance decarbonization and industrialization objectives simultaneously in developing renewable energy projects without breaching WTO rules. In an era when economic nationalism and geopolitical tensions are on the rise, and there are increased calls for coordinated action on climate change, the UK – CfD (EU) dispute should serve as a warning to WTO Members to be careful in balancing decarbonization efforts with a proactive industrial agenda in order to avoid scrutiny at the WTO.

INTRODUCTION	168
I. OFFSHORE WIND ENERGY DEVELOPMENT AND THE CFD SCHEME IN THE UNITED KINGDOM	172
<i>A. Offshore Wind Energy Development in the United Kingdom: A General Introduction</i>	172
<i>B. The CfD Scheme: Design and Operation</i>	173
<i>C. Offshore Wind Energy Manufacturing in the United Kingdom: Lack of Competitiveness</i>	175
II. UK – CFD (EU) AND WTO LAW	179
<i>A. Are the U.K. Measures Consistent with WTO Law?</i>	179
1. <i>Are the challenged measures consistent with the national treatment principle?</i>	182
2. <i>Is there any justification or derogation for the challenged measures?</i>	183
<i>B. Why did the EU Raise Only One Legal Claim Against the United Kingdom in the Complaint?</i>	196
<i>C. Why did the United Kingdom Offer a Mutually Agreeable Solution Without Proceeding to the Panel Stage?</i>	199
<i>D. Why did the EU Choose the WTO Dispute Settlement System as the Forum to Raise the Complaint?</i>	202
III. REFLECTIONS, RECOMMENDATIONS, AND CONCLUSIONS	203
<i>A. Reflections</i>	203
<i>B. Recommendations</i>	205
<i>C. Conclusions</i>	206

INTRODUCTION

In early 2022, the European Union challenged measures adopted by the United Kingdom to promote low-carbon energy generation projects, in particular offshore wind energy projects, by requesting consultations at the World Trade Organization.¹ In so doing, the EU alleged that the U.K. government's incorporation of local content requirements (LCRs) within the Contracts for Difference (CfD) scheme favoured domestic producers over foreign ones and thus ran afoul of Article III:4 of the General Agreement on Tariffs and Trade (GATT).² Moreover, the EU argued, the LCR measures could lead to efficiency losses and higher consumer prices.³ During the WTO consultations, the United Kingdom agreed to exclude LCRs from the CfD scheme despite its earlier intention to contest the EU's claim.⁴ A mutually agreeable solution was reached between the parties, and the EU terminated the dispute settlement proceedings.⁵

The *UK – CfD (EU)* dispute is notable for several reasons. First, it represents the first formal WTO dispute between the EU and the United Kingdom in a time of turbulent bilateral trade relations following Brexit.⁶ Second, the dispute targets the United Kingdom's offshore wind policy

1. Request for Consultations by the European Union, *United Kingdom—Measures Relating to the Allocation of Contracts for Difference in Low Carbon Energy Generation*, WTO Doc. WT/DS612 (Mar. 28, 2022) [hereinafter *U.K. – CfD*].

2. *Id.* Details of the measure are discussed in Section II. Prior to the WTO complaint, the EU expressed concerns with the CfD scheme on other occasions, including the first meeting of the U.K.-EU Trade Specialised Committee on Level Playing Field for Open and Fair Competition and Sustainable Development in October 2021. See Committee on Level Playing Field for Open and Fair Competition and Sustainable Dev., *First Trade Specialised Committee Meeting on Level Playing Field for Open and Fair Competition and Sustainable Development under the U.K.-EU Trade and Cooperation Agreement*, GOV.UK (Oct. 12, 2021), <https://www.gov.uk/government/publications/trade-specialised-committee-on-level-playing-field-for-open-and-fair-competition-and-sustainable-development/minutes-first-trade-specialised-committee-meeting-on-level-playing-field-for-open-and-fair-competition-and-sustainable-development>.

3. European Comm'n Directorate-General for Trade, *EU Challenges Discriminatory Practices of UK's Green Energy Subsidy Scheme at WTO* (Mar. 28, 2022), https://policy.trade.ec.europa.eu/news/eu-challenges-discriminatory-practices-uks-green-energy-subsidy-scheme-wto-2022-03-28_en.

4. See European Comm'n Directorate-General for Trade, *EU and UK Agree on Way Forward in WTO Dispute Concerning UK's Green Energy Subsidy Scheme* (July 1, 2022), https://policy.trade.ec.europa.eu/news/eu-and-uk-agree-way-forward-wto-dispute-concerning-uks-green-energy-subsidy-scheme-2022-07-01_en; Letter from Anne-Marie Trevelyan, the U.K. Secretary of State for International Trade to Valdis Dombrovskis, the Executive Vice President of the European Commission (July 1, 2022), <https://circabc.europa.eu/ui/group/cd37f0ff-d492-4181-91a2-89f1da140e2f/library/716f83bc-702d-4970-bb63-57ded47acbd2/details>.

5. See European Comm'n Directorate-General for Trade, *EU and UK Agree on Way Forward in WTO Dispute Concerning UK's Green Energy Subsidy Scheme* (July 1, 2022), https://policy.trade.ec.europa.eu/news/eu-and-uk-agree-way-forward-wto-dispute-concerning-uks-green-energy-subsidy-scheme-2022-07-01_en.

6. Arthur Sullivan, *EU–U.K. Tensions Hit Boiling Point*, DEUTSCHE WELLE (Oct. 12, 2021), <https://www.dw.com/en/eu-uk-trade-war-looming-as-northern-ireland-protocol-tensions-hit-boiling-point/a-59480437>.

measures, thereby adding to the growing volume of trade disputes concerning renewable energy-supportive measures.⁷ Third, although the transition to a low-carbon energy economy has frequently exacerbated trade tensions over the past decade,⁸ the EU-U.K. dispute occurred at a time when the imperative to shift from fossil fuels and strengthen energy security has become more urgent than ever in the aftermath of the COVID-19 pandemic and shortly following Russia's invasion of Ukraine.

The measures challenged in *UK – CfD (EU)* are a classic example of a government integrating its decarbonization ambition with its industrial strategy.⁹ Under such a strategy, the award of long-term contracts to renewable energy generators contributes to decarbonizing the economy,

7. For examples of other WTO disputes in the renewable energy sector, see Request for Consultations by Malaysia, *European Union—Certain Measures Concerning Palm Oil and Oil Palm Crop-Based Biofuels*, WTO Doc. WT/DS600/1 (Jan. 15, 2021); Request for Consultations by Indonesia, *European Union—Certain Measures Concerning Palm Oil and Oil Palm Crop-Based Biofuels*, WTO Doc. WT/DS593/1 (Dec. 9, 2019); Request for Consultations by China, *United States—Certain Measure Related to Renewable Energy*, WTO Doc. WT/DS563/1 (Aug. 14, 2018); Request for Consultations by China, *United States—Safeguard Measure on Imports of Crystalline Silicon Photovoltaic Products*, WTO Doc. WT/DS562/1 (Aug. 14, 2018); Request for Consultations by India, *United States—Certain Measures Relating to the Renewable Energy Sector*, WTO Doc. WT/DS510/1 (Sept. 9, 2016); Request for Consultations by Argentina, *European Union and Certain Member States—Certain Measures on the Importation and Marketing of Biodiesel and Measures Supporting the Biodiesel Industry*, WTO Doc. WT/DS459/1 (May 15, 2013); Request for Consultations by the United States, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc. WT/DS456/1 (Feb. 6, 2013); Request for Consultations by China, *European Union and Certain Member State—Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS452/1 (Nov. 5, 2012); Request for Consultations by China, *United States—Countervailing Duty Measures on Certain Products from China*, WTO Doc. WT/DS437/1 (May 25, 2012); Request for Consultations by the European Union, *Canada—Measures Relating to the Feed-In Tariff Program*, WTO Doc. WT/DS426/1 (Aug. 11, 2011); Request for Consultations by United States, *China—Measures Concerning Wind Power Equipment*, WTO Doc. WT/DS419/1 (Dec. 22, 2010); Request for Consultations by Japan, *Canada—Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS412/1 (Sept. 13, 2010).

8. This is particularly true for major renewable energy producer countries, such as China, the EU, the United States, Japan, India and Canada, as reflected by the role of these countries as either complainant or respondent in the WTO renewable energy disputes mentioned previously. For a scholarly discussion of renewable energy WTO disputes, see, for example, Joanna I. Lewis, *The Rise of Renewable Energy Protectionism: Emerging Trade Conflicts and Implications for Low Carbon Development*, 14 GLOB. ENV'T POL. 10 (2014); Llewelyn Hughes & Jonas Meckling, *The Politics of Renewable Energy Trade: The U.S.—China Solar Dispute*, 105 ENERGY POL'Y 256 (2017); Mandy Meng Fang, *A Crisis or an Opportunity? The Trade War Between the U.S. and China in the Solar PV Sector*, 54 J. WORLD TRADE 103 (2020).

9. The popularity of LCRs used in the renewable energy sector is well-documented. See, e.g., U.N. Conference on Trade and Development, *Local Content Requirements and the Green Economy*, at 6 (Dec. 16, 2014), https://unctad.org/system/files/official-document/ditcted2013d7_en.pdf; JAN-CHRISTOPH KUNTZE & TOM MOERENHOUT, INT'L CENTER FOR TRADE AND SUSTAINABLE DEV., LOCAL CONTENT REQUIREMENTS AND THE RENEWABLE ENERGY INDUSTRY—A GOOD MATCH? 7 (2012); SHERRY STEPHENSON, INT'L CENTER FOR TRADE AND SUSTAINABLE DEV., ADDRESSING LOCAL CONTENT REQUIREMENTS IN A SUSTAINABLE ENERGY TRADE AGREEMENT 2 (2013); See generally Tyler Matsuo & Tobias Schmidt, *Managing Tradeoffs in Green Industrial Policies: The Role of Renewable Energy Policy Design*, 122 WORLD DEV. 11 (2019); Mandy Meng Fang & Weihuan Zhou, *Greening the Road: China's Low-Carbon Energy Transition and International Trade Regulation*, 35 LEIDEN J. INT'L L. 357, 362-63 (2022); Sufang Zhang et al., *Interactions Between Renewable Energy Policy and Renewable Energy Industrial Policy: A Critical Analysis of China's Policy Approach to Renewable Energies*, 62 ENERGY POL'Y 342, 345-46 (2013).

while the requirement to purchase domestically manufactured energy equipment is primarily aimed at boosting domestic industrial capacity. Such a combination is now commonly referred to as “green industrial policy.”¹⁰ The priority of designing and implementing green industrial policies is to facilitate the economic restructuring and steer the economy towards a greener and more sustainable trajectory.¹¹ It is likely that governments will continue to use industrial policy efforts to scale up investments in low-carbon technologies in the post-pandemic era, given that the rhetoric of “Build Back Greener” continues to gain traction around the globe.¹² However, the growing popularity of industrialization-oriented policies, along with the corresponding rise of economic nationalism, has the potential to fuel a mercantilist green technology competition saturated with trade controversies.¹³ For instance, the US Inflation Reduction Act, which has billions of dollars worth of subsidies for clean technologies, has already generated widespread scepticism even from the US’ close allies.¹⁴ This could

10. There is no agreement on a common definition of green industrial subsidies. The World Bank defines green industrial policies as “sector-targeted policies that affect the economic production structure with the aim of generating environmental benefits.” See Stephane Hallegatte et al., *Green Industrial Policies: When and How* (World Bank, Working Paper No. 6677/3, 2013), <https://openknowledge.worldbank.org/bitstream/handle/10986/16892/WPS6677.pdf?sequence=1&isAllowed=y>. Dani Rodrik argues that policymakers adopt green industrial policies to support society’s long-term targets, such as to “ensure investments in green technologies take place on an appropriate scale.” Dani Rodrik, *Green Industrial Policy*, 30 OXFORD REV. ECON. POL’Y 469 (2014). For scholarship discussing the interplay between green industrial policies and WTO law, see Ilaria Espa, *New Features of Green Industrial Policy and the Limits of WTO Rules: What Options for the Twenty-first Century?*, 53 J. WORLD TRADE 979 (2019); Mandy Meng Fang, *Old Wine in a New Bottle? Green Industrial Policy and the Use of Safeguards in the Solar Sector*, 55 J. WORLD TRADE 573 (2021); AARON COSBEY, ENTWINED, GREEN INDUSTRIAL POLICY AND THE WORLD TRADING SYSTEM, 4-9 (2013), https://www.iisd.org/system/files/publications/entwined_brief_green_industrial.pdf.

11. Allan Bentley et al., *Green Industrial Policy and the Global Transformation of Climate Politics*, 21 GLOB. ENV’T POL. 1, 4 (2021).

12. The Biden Administration signed the Inflation Reduction Act (IRA) into law in August 2022. As estimated, IRA will allocate “\$369 billion for climate spending and energy security”. This represents the largest climate investment in U.S. history. See Zoe Roth, et al., *Inflation Reduction Act Speeds Up Clean Energy Adoption, Spurring IoT Investment*, S&P GLOB. MKT. INTEL. (Oct. 25, 2022), <https://www.spglobal.com/marketintelligence/en/news-insights/research/inflation-reduction-act-speeds-up-clean-energy-adoption-spurring-iot-investment>. The EU’s largest stimulus package to boost the recovery from the pandemic prioritizes building “a greener, more digital and more resilient Europe,” and the “[n]atural resources and environment” section accounts for the largest share of the total budget under the Recovery Plan. See *What Is Europe’s Recovery Plan and How Does It Work?*, EURONEWS (Feb. 9, 2022), <https://www.euronews.com/next/2022/02/09/what-is-europe-s-recovery-plan-and-how-does-it-work>.

13. Jonas Meckling, *Making Industrial Policy Work for Decarbonization*, 21 GLOB. ENV’T POL’Y 134, 143 (2021).

14. *Explainer: Why the U.S. Inflation Reduction Act Has Rattled Europe*, REUTERS, (Feb. 1, 2023, 1:33 PM), <https://www.reuters.com/markets/why-us-inflation-reduction-act-has-rattled-europe-2023-02-01/>.

be particularly problematic while the WTO dispute settlement system is in a serious crisis as a result of dysfunction in the Appellate Body.¹⁵

The fact that *UK – C/D (EU)* did not proceed to the panel stage, coupled with the fact that the legal claim raised by the complainant was not wholly novel, might lead some to overlook or discount the importance of the case.¹⁶ This would be a mistake, however. As this Article argues, *UK – C/D (EU)* differs from previous WTO renewable energy disputes in several fundamentally distinct ways, particularly in the litigation strategy adopted by each party. It is important to carefully examine the ways in which *UK – C/D (EU)* differs from previous renewable energy disputes; this dispute has important implications for political, environmental, and trade strategies that warrant further analysis. Finally, the dispute poses intriguing legal and policy questions that highlight the complex intersection between international trade regulation, decarbonization, and industrialization.

In order to holistically assess the implications of *UK – C/D (EU)*, this Article raises several highly charged questions: Why did the EU bring its legal challenge to the WTO dispute settlement system instead of the TCA, which has a properly functioning dispute resolution mechanism? Why did the EU raise only one legal claim against the United Kingdom in the WTO complaint? Why did the United Kingdom offer a mutually agreeable solution at the consultation stage? Could the United Kingdom's challenged measures have survived WTO scrutiny? How can WTO Members advance both decarbonization and industrial objectives in renewable energy projects without breaching WTO rules? Only by addressing these questions can we further enhance our understanding of the interplay between international trade regulation and low-carbon energy transition.

Given that the dispute involves the intersection of economic, political, and environmental issues, an analysis under a traditional legal perspective would not be able to capture the underlying dynamics of the dispute or propose recommendations for the future. Methodologically, therefore, this Article relies on both legal and policy analysis to reveal the implications of *UK – C/D (EU)* for the rules-based multilateral trading system and Members'

15. See Joost Pauwelyn, *WTO Dispute Settlement Post 2019: What to Expect?*, 22 J. INT'L ECON. L. 297 (2019). A recent example in the renewable energy sector is that China appealed the panel decisions in the dispute *United States – Safeguard Measure on Imports of Crystalline Silicon Photovoltaic Products*, leading to the non-adoption of the panel report. For a discussion of the dispute and its implications for dispute settlement, see Mandy Meng Fang, *Shedding Any New Light? The WTO's Latest Ruling in the US – China Solar Battle*, 17 ASIAN J. WTO & INT'L HEALTH L. & POL'Y 239 (2022).

16. As of this writing, seven disputes (DS563, DS510, DS456, DS452, DS426, DS419 and DS412) brought to the WTO dealt with the use of LCRs in renewable energy-supportive mechanisms. Among them, four disputes (DS510, DS456, DS426 and DS412) received rulings from WTO adjudicators. For an analytical discussion of the four disputes that have been adjudicated, see Mandy Meng Fang, *Local Content Measures and the WTO Regime: Addressing Contentions and Trade Offs*, in LOCAL CONTENT AND SUSTAINABLE DEVELOPMENT IN GLOBAL ENERGY MARKETS (Damilola S. Olawuyi ed., 2021).

efforts to achieve green recovery in the aftermath of the COVID-19 pandemic. In so doing, the Article makes a timely contribution to the scholarly debate concerning the nexus between the international trade regime and green industrial policies.

The Article proceeds as follows. Section I provides necessary background by discussing the development of offshore wind energy and the CfD scheme in the United Kingdom. Section II undertakes a legal analysis of the dispute by applying WTO rules and jurisprudence to the challenged U.K. measures, as well as providing policy analysis in addressing the questions raised above. Section III draws legal and policy lessons from the dispute to offer reflections, recommendations and conclusions to policymakers enacting green industrial policies: to set adequately ambitious but achievable energy deployment targets; to upgrade ailing infrastructure and develop new facilities integral to boosting domestic renewable energy manufacturing capacity; and to revise renewable energy project contracts to consider other fundamentally important factors beyond costs in evaluating projects. This Article sheds light on how the United Kingdom in particular, and WTO Members in general, can blend industrialization and decarbonization goals without contravening international trade regulations.

I. OFFSHORE WIND ENERGY DEVELOPMENT AND THE CFD SCHEME IN THE UNITED KINGDOM

A. Offshore Wind Energy Development in the United Kingdom: A General Introduction

As an island nation, the United Kingdom is blessed with superior geographical conditions for developing offshore wind energy projects.¹⁷ The United Kingdom has sought to take advantage of these conditions, and throughout the past two decades it has experienced an exponential surge in offshore wind energy installation, rendering it the world's second-largest producer in the offshore wind sector.¹⁸ As one of the largest sources of clean energy, offshore wind energy has substantially replaced coal power generation in the United Kingdom and significantly contributed to reducing

17. "The UK is surrounded by seas which boast some of the best wind conditions in the world, with much of the resource located in relatively accessible, shallow waters." See Int'l Trade Admin., *United Kingdom Offshore Wind*, <https://www.trade.gov/market-intelligence/united-kingdom-offshore-wind> (last accessed Feb. 19, 2023); 8 U.K. *Offshore Wind Projects to Reach a Green Revolution: What Is the Plan for Net-Zero?*, AIRSWIFT (July 6, 2021), <https://www.airswift.com/blog/offshore-wind-energy-projects-uk>.

18. PHIL McNALLY, TONY BLAIR INST. FOR GLOB. CHANGE, AN EFFICIENT ENERGY TRANSITION: LESSONS FROM THE UK'S OFFSHORE WIND ROLLOUT (Feb. 18, 2022), <https://institute.global/policy/efficient-energy-transition-lessons-uks-offshore-wind-rollout>.

carbon emissions there while delivering environmental benefits.¹⁹ The robust growth in the United Kingdom's offshore wind deployment has also led to a dramatic reduction in the cost of wind-sourced power and correspondingly increased the competitiveness of renewable energy.²⁰ Having committed to a fully decarbonized power system by 2035 and carbon neutrality by 2050, the United Kingdom recently revised its goal for installation of offshore wind energy from a planned achievement of 30 GW to a new target of 50 GW.²¹

As a capital-intensive technology, offshore wind energy faces massive upfront expenditures and presents high perceived risks to investors, which makes stable access to a long-term finance critical to its deployment.²² Since the early 2000s, the United Kingdom has designed and enacted various forms of regulatory support, including the Renewables Obligation and feed-in tariffs (FITs), to provide market incentives and attract investors.²³ Ever-changing circumstances, such as declining costs of technologies and increasingly ambitious deployment targets, require continual adaptation of the policy instruments at the government's disposal. Seeking to encourage sufficient renewable energy investments in a more efficient and cost-effective manner, the U.K. government rolled out its Electricity Market Reform and replaced the Renewables Obligation with the CfD scheme to attract more investment in low-carbon electricity generation, enhance supply security and bring down the consumer cost.²⁴

B. The CfD Scheme: Design and Operation

A CfD is a private bilateral contract between the government-owned Low Carbon Contract Company (LCCC) and a low-carbon energy project

19. The share of offshore wind-sourced electricity in the U.K.'s total energy mix reached 13% in 2020. *Id.*

20. *Id.*

21. Press Release, Dep't for Business, Energy, & Industrial Strategy & The Rt Hon Kwasi Kwarteng MP, Plans Unveiled to Decarbonise UK Power System by 2035 (Oct. 7, 2021), <https://www.gov.uk/government/news/plans-unveiled-to-decarbonise-uk-power-system-by-2035>; *UK Energy Strategy Further Increases Offshore Targets, Leaves Door Open for Onshore*, WIND EUROPE (Apr. 13, 2022), <https://windeurope.org/newsroom/news/uk-energy-strategy-further-increases-offshore-targets-leaves-door-open-for-onshore/#:~:text=To%20accelerate%20this%20process%20the,GW%20would%20have%20been%20floating>.

22. See Walter Musial et al., *Offshore Wind Market Report: 2021 Edition*, U.S. DEP'T OF ENERGY 82, 99 (2021).

23. See *Renewables Obligation (RO)*, IEA/IRENA RENEWABLES POLICIES DATABASE (July 30, 2015), <https://www.iea.org/policies/4182-renewables-obligation-ro>.

24. *Electricity Market Reform: Contracts for Difference*, U.K. DEP'T FOR BUS., ENERGY, & INDUS. STRATEGY (Feb. 8, 2017), <https://www.gov.uk/government/collections/electricity-market-reform-contracts-for-difference>.

developer, awarded through a competitive auction.²⁵ Under a CfD, a successful developer of a low-carbon project will receive a flat rate for electricity production over a fifteen-year period, which enables revenue stabilisation at a pre-agreed level (the “strike price”).²⁶ Nevertheless, the strike price set out in the contract could be higher than the market price for electricity generated by a CfD developer (the “reference price”), which requires the LCCC to make the payments to the developer to make up the difference.²⁷ When the reference price is higher than the strike price, the CfD developer pays the difference to the LCCC. In this regard, “the CfD scheme acts as a hedge both for generators against low market prices... [and] for suppliers against high market prices.”²⁸ Besides attracting investment to the low-carbon energy sector, the CfD scheme also stabilises the cost of electricity and ensures that affordable energy will be delivered to end-consumers.

As of this writing, the CfD scheme has undergone four allocation rounds (2015, 2017, 2019 and 2021) in which the competitiveness of offshore wind energy projects in winning CfD contracts has grown steadily.²⁹ The volume of offshore wind projects awarded under the CfD scheme surged from slightly over 1.1 GW in the first round of allocation to almost 7 GW (out of a total of 11 GW) in the latest round.³⁰ While the initial strike prices for offshore wind power projects were £119.89/MWh and £114.39/MWh, the fourth round price of £37.35/MWh set the record for the lowest cost among all renewable technologies.³¹ With an ambitious

25. The LCCC is a private limited company owned by the U.K. Secretary of State for Business, Energy and Industrial Strategy (BEIS). See *About Us*, LOW CARBON CONTRS. CO., <https://www.lowcarboncontracts.uk/about-us> (last visited Feb. 18, 2023).

26. The strike price is defined as “a price for electricity reflecting the cost of investing in the renewable energy project.” For a detailed discussion of the design and operation of the CfD scheme, see Marijke Welisch & Rahmatallah Poudineh, *Auctions for Allocation of Offshore Wind Contracts for Difference in the UK*, 147 RENEWABLE ENERGY 1266, 1267-68 (2020).

27. The reference price is defined as “the average market price for electricity in the U.K. market.” See *Contracts for Difference (CfD) Booklet 2016/17: Overview of the CfD Mechanism and Delivery Partners*, LCCC & NATL GRID, <https://www.lowcarboncontracts.uk/publications/contracts-for-difference-cfd-booklet-201617-overview-of-the-cfd-mechanism-and-delivery-partners> (last visited Mar. 12, 2023).

28. Andreas Zimmerman, *Contracts for Difference – Delivering Affordable Low Carbon Electricity*, in GB, LOW CARBON CONTRS. CO., (Oct. 20, 2021), <https://www.lowcarboncontracts.uk/blogs-insights/contracts-for-difference-delivering-affordable-low-carbon-electricity-in-gb>.

29. Victoria Judd, *Financing the Green Transition: The Evolution of Contracts for Difference*, FINANCIER WORLDWIDE (Jan. 2021), https://www.financierworldwide.com/financing-the-green-transition-the-evolution-of-contracts-for-difference#_BuU3YRWUk.

30. David Weston, *UK Awards First CfD Round*, WINDPOWER MONTHLY (Feb. 26, 2015), <https://www.windpowermonthly.com/article/1335815/uk-awards-first-cfd-round> (displaying detailed information on the first CfD round for offshore wind projects); Adrijana Buljan, *UK Secures 7 GW of New Offshore Wind, Awards CfD to World's Single Biggest OWF*, OFFSHOREWIND (July 7, 2022), <https://www.offshorewind.biz/2022/07/07/uk-secures-7-gw-of-new-offshore-wind-awards-cfd-to-worlds-single-biggest-owf/> (displaying detailed information on the fourth round of CfD for offshore wind projects).

31. *Id.*

offshore wind development target in place, it is reasonable to anticipate that offshore wind projects will continue to be the main drivers of the CfD scheme.

C. Offshore Wind Energy Manufacturing in the United Kingdom: Lack of Competitiveness

The U.K. government's proactive policies and procedures have made the country one of the world's most attractive locations to develop offshore wind farms.³² But the rapid growth in the deployment of wind energy in the United Kingdom has not led to a robust domestic wind energy equipment manufacturing industry or delivered substantial economic gains such as the creation of jobs or development of local supply chains. The lack of competitiveness of U.K.-based companies in securing large contracts under the CfD scheme is reflected in the results of previous allocation rounds. In fact, it is estimated that only around thirty percent of capital expenditure on offshore wind projects goes into the U.K. economy.³³ The discrepancy between a large-scale domestic market for wind power and a limited number of domestic firms supplying equipment to the industry is somewhat curious, as local manufacturing, in many cases, develops in markets with significant market demand driven by government policies and mandates. For example, countries with major wind energy installations like Denmark, Germany, and China are also home to internationally competitive wind turbine manufacturers.³⁴ The reason for this may be partially that wind turbines and components are generally bulky in size and heavy, making long-distance transportation more expensive and less efficient. Wind energy equipment manufacturers and their suppliers tend to establish clusters of firms in close proximity to the final site of installation in order to reduce or avoid logistical expenses.³⁵ Therefore, there should be a good opportunity for a homegrown industry in manufacturing wind energy equipment.

There are two possible explanations for the lack of competitiveness displayed by U.K.-based wind energy equipment manufacturing firms in recent years.³⁶ First, the priority the CfD scheme places on providing the

32. Paraic Higgins & Aoife Foley, *The Evolution of Offshore Wind Power in the United Kingdom*, 37 RENEWABLE & SUSTAINABLE ENERGY REV. 599, 607 (2014).

33. "If development, operations, and maintenance are added" into the calculation, around 48 per cent of "capital expenditure on offshore wind projects... goes into the U.K. economy." See Nathalie Thomas & Chris Tighe, *Why UK Pledge to Become 'Saudi Arabia' of Wind Power Rings Hollow*, FIN. TIMES (Jan. 8, 2021), <https://www.ft.com/content/50cd8a9d-3f2a-461d-9335-08319c5f7626>.

34. *Global Top 15 Wind Turbine Manufacturers*, BLACKRIDGE (June 7, 2022), <https://www.blackridgeresearch.com/blog/top-wind-turbine-manufacturers-makers-companies-suppliers>.

35. JONAS NAHM, COLLABORATIVE ADVANTAGE: FORGING GREEN INDUSTRIES IN THE NEW GLOBAL ECONOMY 13 (2021).

36. Thomas & Tighe, *supra* note 33.

least expensive price to consumers has considerably weakened the competitiveness of British companies, which usually are not the lowest bidders.³⁷ Primarily due to economies of scale, wind energy equipment manufacturing companies from Europe and China are more cost-competitive and thus enjoy a higher rate of success in bidding.³⁸ Admittedly, bringing down the cost of offshore wind projects is a significant factor in levelling the playing field between wind power and other traditionally lower-cost energy sources, like coal and gas.³⁹ However, the narrow goal of achieving the lowest cost when awarding project contracts, achieved via auctions, has received rising criticism for overlooking fundamentally important public interest-related factors such as environmental protection and energy transition justice.⁴⁰ Some countries have begun to use a multi-factor auction format in energy projects that focuses not only on costs but includes other conventionally dismissed factors.⁴¹

Second, underinvestment in key infrastructure has put U.K.-based wind energy equipment manufacturers at a severe disadvantage in competing with Asian and European counterparts with access to more modern and efficient facilities.⁴² An illustrative example is the inability of ports in the United Kingdom to accommodate turbines of the growing size as expected within the next few years.⁴³ Connecting the local supply chain with well-built logistics and auxiliary infrastructure, warehouses and ports also is integral to

37. Wind turbine manufacturing firms from Denmark, China, Germany and the United Arab Emirates are more cost-competitive than U.K.-based firms, and arguably benefit from cheaper labour or stronger financial and policy support to drive down costs. *Id.*

38. *Id.*

39. Henok Asmelash, *Energy Subsidies and WTO Dispute Settlement: Why Only Renewable Energy Subsidies Are Challenged*, 18 J. INT'L ECON. L. 264 (2015).

40. Teresa R. Christopher, *The Road to 30 Gigawatts: Key Actions to Scale an Offshore Wind Industry in the United States*, CTR. FOR AMERICAN PROGRESS (Mar. 14, 2022), <https://www.americanprogress.org/article/the-road-to-30-gigawatts-key-actions-to-scale-an-offshore-wind-industry-in-the-united-states/>.

41. For instance, the U.S. Bureau of Ocean Energy Management has started obtaining feedback on developing a multi-factor auction format for wind energy auctions and began to implement the policy with a project planned for an area in North Carolina. See COLLABORATIVE U.S. BUREAU OF OCEAN ENERGY MANAGEMENT, *Atlantic Wind Lease Sale 9 for Commercial Leasing for Wind Power on the Outer Continental Shelf in the Carolina Long Bay Area – Proposed Sale Notice*, 86 Fed. Reg. 60274 (Jan. 11, 2021). In the Netherlands, environmental mitigation and systems integration constitute an important aspect of the latest tender for offshore wind projects: fifty percent of bid scoring at Site VI of Hollandse Kust West, for example, is based on criteria such as the extent to which a bid would “limit the negative effect of the project on birds and the marine habitat.” The use of non-price criteria can “help recognise and reward the ‘added value’ provided by offshore wind energy.” See David Foxwell, *Not Just About Price: Hollandse Kust West is A Dutch Auction with A Difference*, RIVIERA (May 18, 2022), <https://www.rivieramm.com/news-content-hub/not-just-about-price-hollandse-kust-west-is-a-dutch-auction-with-a-difference-71161>.

42. Elaine Maslin, *Port Capacity in Question as UK Offshore Wind Expands*, OFFSHORE ENG’R (Apr. 1, 2022), <https://www.oedigital.com/news/495492-port-capacity-in-question-as-uk-offshore-wind-expands>.

43. *Id.*

enabling installation, operation, and maintenance works throughout the entire life cycle of offshore wind plants.⁴⁴ Without large-scale investment in upgrading logistical infrastructure and pertinent facilities, it will be extremely hard for the United Kingdom to nurture a globally competitive industry in manufacturing wind energy equipment.⁴⁵

The United Kingdom's inability to translate the booming domestic wind market into large-scale economic benefits such as employment opportunities and manufacturing growth has invited serious criticism from the public.⁴⁶ For example, in the second allocation round, the representative from the United Kingdom's trade association for wind industry urged the government to "[put] offshore wind at the heart of its upcoming Industrial Strategy."⁴⁷ The collapse of a large Scotland-based wind energy equipment manufacturer, Burntisland Fabrications, generated further criticism of the government's failure to directly support the manufacturing industry.⁴⁸

Facing mounting pressure, the U.K. government decided to factor in the interests of domestic firms for the fourth allocation round of the CfD scheme.⁴⁹ Based on proposals to strengthen the domestic wind supply chain competitiveness, the policymakers added local content as a new requirement that CfD applicants for projects of 300 MW and above must satisfy to be eligible for developing such projects and obtaining subsidies.⁵⁰ Each developer was required to outline how much of the contract's value would

44. Press Release, WindEurope, Upscaling Europe's Port Infrastructure Critical for Offshore Wind Development (May 27, 2021), <https://windeurope.org/newsroom/press-releases/upscaling-europes-port-infrastructure-critical-for-offshore-wind-development/#:~:text=In%20a%20new%20report%2C%20WindEurope,are%20central%20to%20offshore%20wind.>

45. The UK government plans to invest "£160 million into ports and manufacturing infrastructure...in coastal regions." See DEP'T FOR BUS., ENERGY & INDUS. STRATEGY, PRIME MINISTER'S OFFICE, THE TEN POINT PLAN FOR A GREEN INDUSTRIAL REVOLUTION, 2020, at 8 (U.K.), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN_BOOKLET.pdf.

46. Rob McLaren, *Disappointment Has Turned to Anger – BiFab Overlooked for Seagreen Wind Farm*, ENERGY VOICE (Sept. 19, 2020, 8:00 AM), <https://www.energyvoice.com/renewables-energy-transition/266365/bifab-overlooked-seagreen-wind-farm/>.

47. Liam Stoker, *CfD Round Two: The Industry Reacts*, CURRENT±, (Sept. 11, 2017, 11:02 AM), <https://www.current-news.co.uk/news/cfd-round-two-the-industry-reacts>.

48. Martin Williams, *Anger As Part Scottish Government-Owned BiFab Files for Administration*, HERALD (Dec. 3, 2020), <https://www.heraldscotland.com/news/18917441.anger-part-scottish-government-owned-bifab-files-administration/#comments-anchor>.

49. Alterations to the CfD scheme were made after a consultation with different stakeholders, such as developers of renewable energy generating stations, trade associations, trade unions and local governments. See DEP'T FOR BUS., ENERGY & INDUS. STRATEGY, CONTRACTS FOR DIFFERENCE FOR LOW CARBON ELECTRICITY GENERATION: GOVERNMENT RESPONSE TO CONSULTATION ON CHANGES TO SUPPLY CHAIN PLANS AND THE CFD CONTRACT 6 (2020), <https://www.gov.uk/government/consultations/contracts-for-difference-cfd-changes-to-supply-chain-plans-and-the-cfd-contract>.

50. *Id.* at 7; *EU Initiates Dispute Over UK Measures on Low Carbon Energy Generation*, THIRD WORLD NETWORK INFO SERVICE ON WTO & TRADE ISSUES (Apr. 01, 2022), <https://www.twn.my/Wtitle2/wto.info/2022/ti220401.htm>.

be produced in the United Kingdom and how their projects would improve the “competitiveness” and “productivity” of the domestic wind energy equipment industry.⁵¹ Simply stated, the measures focused on “increasing [the United Kingdom’s] energy security and supply of homegrown renewable energy.”⁵²

The effectiveness of LCRs in achieving industrial objectives, as envisaged by U.K. policymakers, remains unknown, since the effective period of those requirements in the CfD scheme was too brief to assess. Nevertheless, mandating the use of locally-manufactured wind power equipment and components would be likely to generate some short-term negative consequences.⁵³ For instance, LCRs would raise the price of wind energy, since more than fifty percent of the total cost of building an offshore wind farm comes from purchasing wind turbines and U.K.-manufactured turbines are more expensive than those from foreign competitors.⁵⁴ In other words, the mandated level of local content could considerably affect the economic feasibility and cost-competitiveness of an offshore wind energy project. The higher the local content level required, the greater the challenge would be for a wind energy developer to lower costs. Relatedly, the use of LCRs would risk the delay or even cancellation of wind energy projects due to that higher cost, which would directly hurt the interests of downstream installation and maintenance industries—sectors that usually harbor more potential for employment opportunities.⁵⁵ Thus, while the manufacturing sector might be protected by LCRs, other sectors along the wind energy value chain that might offer more employment opportunities could be undermined as a result. In addition, a slowdown of wind energy deployment would add to the difficulty of the transition away from fossil fuels and the realization of carbon neutrality.

This is not to argue that the use of LCRs is automatically futile. However, as cautioned by the International Renewable Energy Agency (IRENA), it

51. *Id.* at 19.

52. Andy Bounds & Jim Pickard, *EU Confronts UK on Wind Turbines in First WTO Dispute Since Brexit*, FIN. TIMES (Mar. 28, 2022), <https://www.ft.com/content/13a158ec-0664-431d-952b-d50e5ea33fc>.

53. See Morgan Brazilian et al., *Local-Content Rules for Renewables Projects Don't Always Work*, 32 ENERGY STRATEGY REV. 100569 (2020) (discussing the impact of local-content rules in Brazil, India, and South Africa).

54. CINDA SEC. RSCH. & DEV. CTR., THE DIVISION OF THE COST STRUCTURE OF WIND ENERGY SOURCED ELECTRICITY (2021), https://pdf.dfcfw.com/pdf/H3_AP202110251524846430_1.pdf?1635174882000.pdf.

55. “Offshore wind farms require more labour than onshore wind farms. Construction and installation are more complex, involving not just the usual towers, blades and turbines, but also complex foundations and installation vessels, as well as substations and undersea cables to bring electricity onshore.” The job opportunities throughout the whole life cycle of an offshore wind farm project are sizeable. INT’L RENEWABLE ENERGY AGENCY (IRENA), RENEWABLE ENERGY AND JOBS: ANNUAL REVIEW 2021 27 (2021).

can be particularly challenging for an implementing state to ensure the effectiveness of LCRs in the wind energy sector.⁵⁶ Making LCRs effective would require “further efforts in contracting arrangements, technical development and co-operation, and local capacity development.”⁵⁷ Otherwise, the use of LCRs can easily impose more costs than benefits. Therefore, governments should form clear strategies to mobilize all stakeholders throughout the entire renewable energy value chain in order for LCRs to function properly. Therefore, before a government decides to implement LCRs on renewable energy projects, it will be important for it to assess potential economic, social, and environmental ramifications and plan a holistic industrial toolkit.

II. *UK – CFD (EU)* AND WTO LAW

This section begins by examining the compatibility of the measures at issue in *UK – CFD (EU)* with WTO rules before addressing several questions about the litigation strategies of the two parties in order to better assess the implications of the dispute for the rules-based multilateral trading system. Addressing these questions can assist in developing a holistic assessment of the dispute and drawing lessons from the interplay between renewable energy support and international trade regulation.

A. Are the U.K. Measures Consistent with WTO Law?

As discussed above, the EU alleged that the measures at issue—LCRs incorporated as a criterion of eligibility for subsidies for renewable energy electricity generators—were inconsistent with the national treatment principle of GATT Article III:4.⁵⁸ As one of the core principles of the WTO, the national treatment obligation is meant to eliminate the protectionist use of domestic instruments and to promote fairness and non-discrimination in international trade.⁵⁹ Without the application of the national treatment obligation to internal measures, the carefully crafted balance of tariffs could be easily undermined by various forms of fiscal measures or regulatory intervention.⁶⁰

56. *Id.* at 9.

57. *Id.*

58. General Agreement on Tariffs and Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 187 [hereinafter GATT].

59. See SIMON LESTER et al., *WORLD TRADE LAW: TEXT, MATERIALS AND COMMENTARY* 265 (3d ed. 2018).

60. Michael Daly, *Is the WTO A World Tax Organisation? A Primer on WTO Rules for Tax Policymakers*, INT'L MONETARY FUND: FISCAL AFFS. DEP'T 11-12 (Mar. 2016).

The legal claim raised by the EU is in line with other WTO renewable energy disputes concerning the use of LCRs, in which all but one of the complainants cited GATT Article III:4 in their requests for consultations (see Table 1).⁶¹ This section applies GATT Article III:4 to the EU-U.K. dispute and examines whether any justification or derogation saves the measures from being inconsistent with WTO rules.

Disputes	Challenged Measures	Agreements Cited in Request for Consultations
DS612 <i>UK – C/D (EU)</i> ⁶²	LCRs and subsidies	<ul style="list-style-type: none"> ▪ GATT Article III:4
DS563 <i>US – Renewable Energy (China)</i> ⁶³	LCRs, tax incentives and grants	<ul style="list-style-type: none"> ▪ GATT Article III:4; ▪ Agreement on Trade Related Investment Measures (TRIMs Agreement)⁶⁴ Articles 2.1 and 2.2; ▪ Agreement on Subsidies and Countervailing Measures (SCM Agreement)⁶⁵ Articles 3.1(b) and 3.2
DS510 <i>US – Renewable Energy (India)</i> ⁶⁶	LCRs, financial incentives	<ul style="list-style-type: none"> ▪ GATT Article III:4; ▪ TRIMs Agreement Article 2.1; ▪ SCM Agreement Articles 3.1(b), 3.2, 25, and 1.1

61. Nevertheless, it is noted in *China – Measures Concerning Wind Power Equipment*, *supra* note 7, that the United States did not raise any claim under GATT Article III:4.

62. See *U.K. – C/D*, *supra* note 1.

63. See Request for Consultations by China, *United States–Certain Measure Related to Renewable Energy*, WTO Doc. WT/DS563/1 (Aug. 14, 2018).

64. Agreement on Trade-Related Investment Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 U.N.T.S. 186 [hereinafter TRIMs Agreement].

65. Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1869 U.N.T.S. 14 [hereinafter SCM Agreement].

66. See Request for Consultations by India, *United States–Certain Measures Relating to the Renewable Energy Sector*, WTO Doc. WT/DS510/1 (Sept. 9, 2016).

DS456 <i>India – Solar Cells</i> ⁶⁷	LCRs	<ul style="list-style-type: none"> ▪ GATT Article III:4; ▪ TRIMs Agreement Article 2.1; ▪ SCM Agreement Articles 3.1(b), 3.2, 25(c), 6.3(a) and 25
DS452 <i>EU and Certain Member States – Renewable Energy</i> ⁶⁸	LCRs	<ul style="list-style-type: none"> ▪ GATT Articles I, III:1; III:4, III:5; ▪ TRIMs Agreement Articles 2.1 and 2.2; ▪ SCM Agreement Articles 1.1; 3.1(b) and 3.2
DS419 <i>China – Wind Power Equipment</i> ⁶⁹	LCRs	<ul style="list-style-type: none"> ▪ GATT Article XVI:1; ▪ SCM Agreement Articles 3, 25.1, 25.2, 25.3, and 25.4; ▪ China’s Protocol of Accession Part 1, para 12
DS426 <i>Canada – Feed-In Tariff Program</i> ⁷⁰	LCRs and FIT program	<ul style="list-style-type: none"> ▪ GATT Article III:4; ▪ TRIMs Agreement Article 2.1; ▪ SCM Agreement Articles 1.1, 3.1(b) and 3.2
DS412 <i>Canada – Renewable Energy</i> ⁷¹	LCRs and FIT program	<ul style="list-style-type: none"> ▪ GATT Articles III:4, III:5 and XXIII:1; ▪ TRIMs Agreement Article 2.1; ▪ SCM Agreement Articles 1.1, 3.1(b) and 3.2

67. See Request for Consultations by the United States, *India–Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc. WT/DS456/1 (Feb. 6, 2013).

68. Request for Consultations by China, *European Union and Certain Member State–Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS452/1 (Nov. 5, 2012).

69. Request for Consultations by United States, *China–Measures Concerning Wind Power Equipment*, WTO Doc. WT/DS419/1 (Dec. 22, 2010).

70. Request for Consultations by the European Union, *Canada–Measures Relating to the Feed-In Tariff Program*, WTO Doc. WT/DS426/1 (Aug. 11, 2011).

71. Request for Consultations by Japan, *Canada–Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS412/1 (Sept. 13, 2010).

Table 1. *WTO Renewable Energy Disputes Concerning the Use of LCRs (as of August 2022)*⁷²
(Source: compiled by the author)

1. *Are the challenged measures consistent with the national treatment principle?*

GATT Article III:4 provides as follows:

The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use. The provisions of this paragraph shall not prevent the application of differential internal transportation charges, which are based exclusively on the economic operation of the means of transport and not on the nationality of the product.⁷³

Finding government measures inconsistent with GATT Article III:4 requires three elements: first, “the imported and domestic products at issue are like products”; second, “the measure at issue is a law, regulation, or requirement affecting their internal sale, offering or sale, purchase, transportation, distribution, or use”; third, “the imported products are accorded less favourable treatment than that accorded to like domestic products.”⁷⁴

Each of these elements is present in *UK – CfD (EU)*. First, the imported and domestically manufactured renewable energy products at issue, primarily wind turbines and their components, are “like products,” since the sole distinguishing aspect between them is their origin.⁷⁵ Second, the CfD scheme of LCRs constitutes government regulation in the renewable energy market, because the “government [has] determine[d] the key parameters...[such as] the list of eligible technologies, the budget, [and]

72. See generally Henok Asmelash, *The First Ten Years of WTO Jurisprudence on Renewable Energy Support Measures: Has the Dust Settled Yet?*, 21 *WORLD TRADE REV.* 455, 459 (2022).

73. GATT, *supra* note 58, art. III:4.

74. Appellate Body Report, *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, WTO Doc. WT/DS161/AB/R, ¶ 133, WTO Doc. WT/DS169/AB/R (adopted Dec. 11, 2000) [hereinafter *Korea – Various Measures on Beef*].

75. The Appellate Body stated that a determination of likeness under GATT Article III:4 is a determination about “the nature and extent of a competitive relationship between and among products.” See Appellate Body Report, *European Communities – Measures Affecting Asbestos and Products Containing Asbestos*, ¶ 99, WTO Doc. WT/DS135/AB/R (adopted Mar. 12, 2001) [hereinafter *EC – Asbestos*]. However, the jurisprudence endorsed the proposition that where a measure distinguishes between products solely on the basis of origin, the likeness of the products so distinguished can be presumed. See Panel Report, *India – Measures Affecting the Automotive Sector*, ¶ 7.174, WTO Doc. WT/DS146/R (adopted Dec. 21, 2001) [hereinafter *India – Autos*].

administrative strike prices.”⁷⁶ This regulatory scheme certainly, “affect[s]” the internal sale, purchase, or use of the product, as LCRs impact the conditions of competition by conferring an advantage on the use of a domestic product but not on the use of a similar imported product.⁷⁷ Third, LCRs accord “less favourable treatment” to imported products, as successful applicants for the CfD scheme are not permitted to use more than a specific percentage of foreign-made products. Therefore, the challenged measures in *UK – CfD (EU)* violate the national treatment principle prescribed by GATT Article III:4.

2. Is there any justification or derogation for the challenged measures?

Even when a measure is otherwise inconsistent with WTO rules, however, the GATT offers exceptions in particular circumstances that exempt or justify the breach. It might therefore be possible for the United Kingdom to defend the legitimacy of the CfD scheme, provided that it met the requirements of the WTO’s exceptions. Although no WTO Member has successfully justified a renewable energy support measure containing LCRs in front of the panel or the Appellate Body,⁷⁸ rapidly changing social and geopolitical circumstances in recent years might warrant a reassessment of the scope of available policy space. The WTO is not hostile to an evolutionary or dynamic interpretative approach that takes account of recent “changes in the political, social, [or] historical...context.”⁷⁹ In this regard, recent events such as the outbreak of COVID-19, the U.S.-China trade war, and Russia’s invasion of Ukraine may affect the interpretation of certain WTO rules.

This section identifies several GATT clauses providing exceptions relevant to this dispute: Article III:8(a), which is a built-in derogation for government procurement, and Article XX, which contains general exceptions. It starts by attempting to apply GATT Article III:8(a) to this case and then moves to discuss four relevant provisions of GATT Article XX.

GATT Article III:8(a) provides as follows:

76. *Contracts for Difference (CfD) to Accelerate Electricity Market Reform and Launch Auctions for Renewable Energy*, GLOB. INFRASTRUCTURE HUB (Nov. 1, 2021) <https://www.gihub.org/emerging-funding-and-finance/case-studies/contracts-for-difference-cfd-to-accelerate-electricity-market-reform-and-launch-auctions-for-renewable-energy/>.

77. Panel Report, *Canada – Certain Measures Affecting the Automotive Industry*, ¶ 10.82, WTO Doc. WT/DS139/R (adopted Feb. 11, 2000) [hereinafter *Canada – Autos*].

78. See Fang, *supra* note 16.

79. See generally Gabrielle Marceau, *Evolutionary Interpretation by the WTO Adjudicator*, 21 J. INT’L. ECON. L. 791, 791 (2018) (discussing factors that may influence treaty interpretation).

The provisions of this Article shall not apply to laws, regulations or requirements governing the procurement by governmental agencies of products purchased for governmental purposes and not with a view to commercial resale or with a view to use in the production of goods for commercial sale.⁸⁰

GATT Article III:8(a) carves out policy space for certain government procurement measures. Though it was dormant for more than six decades, this provision became a focal point in two recent renewable energy disputes—*Canada – FIT/Renewable Energy* and *India – Solar Cells*.⁸¹ The established WTO jurisprudence suggests the highly onerous hurdle that a government has to overcome if the government wishes to successfully avail itself of GATT Article III:8(a) to exempt the use of LCRs in renewable energy support schemes from being GATT-inconsistent.⁸² The provision requires that products purchased as part of government procurement must be “like,” “directly competitive” with, or “substitutable” for the foreign products being discriminated against (the so-called “competitive relationship test”), which would serve as a major hurdle to its use.⁸³ Unsurprisingly, all attempts by respondents in previous WTO disputes to avail themselves of GATT Article III:8(a) have been unsuccessful.⁸⁴ WTO adjudicators have consistently followed a restrictive interpretation of GATT Article III:8(a), in particular the “competitive relationship test.”⁸⁵ The rapidly unfolding social and geopolitical circumstances pointed out earlier are not likely to modify this interpretation of GATT Article III:8(a).

80. GATT, *supra* note 58, art. III:8(a).

81. Only in these two cases did the WTO adjudicatory bodies provide its interpretative understanding of the scope of Article III:8 with reference to LCRs. See Appellate Body Report, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector/Feed-in Tariff Program*, ¶¶ 5.34-5.74, WTO Doc. WT/DS412/426/AB/R (adopted May 6, 2013) [hereinafter *Canada – Renewable Energy/FIT*]; Appellate Body Report, *India – Certain Measures Relating to Solar Cells and Solar Modules*, ¶¶ 5.1-5.44, WTO Doc. WT/DS456/AB/R (adopted Sept. 16, 2016) [hereinafter *India – Solar Cells*].

82. For a scholarly discussion of GATT Article III:8(a), see Asmelash, *supra* note 82; Mandy Meng Fang, *Shades of Green: Mapping the Parameters of the GATT Article III:8(a) Government Procurement Derogation in the Renewable Energy Transition*, 20 J. WORLD INV. & TRADE 553 (2019); Alan Yanovich, *Canada – Renewable Energy and Canada – FIT Program – Debunking the Myth that the GATT 1994 Provides Carte Blanche to Discriminate in Government Procurement*, 8 GLOB. TRADE & CUSTOMS J. 430 (2013); Arwel Davies, *The GATT Article III:8(a) Procurement Derogation and Canada – Renewable Energy*, 18 J. INT'L ECON. L. 543 (2015); Kamala Dawar, *Government Procurement in the WTO: A Case for Greater Integration*, 15 WORLD TRADE REV. 645 (2016); Aditya Sarmah, *Renewable Energy and Article III:8(a) of the GATT: Reassessing the Environment – Trade Conflict in Light of the ‘Next Generation’ Cases*, 9 TRADE, L. & DEV. 197 (2017).

83. See *Canada – Renewable Energy/FIT*, *supra* note 81, ¶ 5.74; *India – Solar Cells*, *supra* note 81, ¶ 5.40; Fang, *supra* note 82, at 570.

84. In *India – Solar Cells*, India challenged the panel decision and argued that “solar modules are inherent to and have no purpose other than to generate solar power, and the government’s purchase of electricity was essentially a purchase of the solar cells and modules themselves.” See *India – Solar Cells*, *supra* note 81; Panel Report, *India – Certain Measures Relating to Solar Cells and Solar Modules*, ¶ 7.114, WTO Doc. WT/DS456/R (adopted Feb. 24, 2016).

85. See Fang, *supra* note 82, at 571-72.

Therefore, it would be extremely difficult for the United Kingdom to rely on GATT Article III:8(a) for an exception, since what was discriminated against (offshore wind energy generation equipment) and what was purchased under the CfD scheme (offshore wind generated electricity) were clearly not in a competitive relationship as required by GATT Article III:8(a).⁸⁶ Meanwhile, the United Kingdom cannot exonerate discriminatory LCRs from GATT Article III:4 through the Article III:8(a) carve-out, since the United Kingdom has acceded to the WTO Government Procurement Agreement, rendering the carve-out unavailable.⁸⁷

The other possible shelter for the U.K. program is GATT Article XX, “General Exceptions,” which has “a much wider scope and covers a broad range of policy justifications for exceptions, from public morals, human health, and animal welfare to environment and labour conditions.”⁸⁸ In order to meet the requirements of Article XX, a measure must pass a two-tier test. First, it must “fall within the scope of one of the enumerated exceptions contained in the Article, and second, it must meet the requirements of the chapeau.”⁸⁹ A WTO Member’s ability to act to promote the public policy objectives as listed in Article XX should not be unduly restricted even when such action breaches GATT obligations.⁹⁰ As an application of the sovereignty principle, the general exception provision holds the same status as other principles and norms, contributing to a well-balanced multilateral trading system.⁹¹

The use of LCRs would not be prohibited if it could be provisionally justified by a specific Article XX exception and complied with the requirements of the chapeau. Though they are the most frequently cited Articles in trade and environment disputes, GATT Article XX(b) and (g) have never been invoked by any defending Member in WTO renewable energy disputes.⁹² Only once has the respondent invoked Article XX—India

86. *See id.* at 575-76; ANGELICA RUTHERFORD, ENERGY SECURITY AND GREEN ENERGY 130 (2020) (arguing that “trade restrictive measures [. . .] will only have chances to succeed in a scenario where the energy market structure is basically nationalized [. . .] without the participation of the private sector in a competitive relationship”).

87. *UK to Join Government Procurement Pact in Its Own Right in the New Year*, WTO (Oct. 7, 2020), https://www.wto.org/english/news_e/news20_e/gpro_07oct20_e.htm.

88. *See* LESTER et al., *supra* note 59, at 373-74.

89. Appellate Body Report, *US – Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 118, WTO Doc. WT/DS58/AB/R (adopted Oct. 12, 1998) [hereinafter *US – Shrimp*].

90. JOHN JACKSON, THE WORLD TRADING SYSTEM: LAW AND POLICY OF INTERNATIONAL ECONOMIC RELATIONS 233 (2d ed. 1997).

91. THOMAS COTTIER & MATTHIAS OESCH, INTERNATIONAL TRADE REGULATION: LAW AND POLICY IN THE WTO, THE EUROPEAN UNION AND SWITZERLAND: CASES, MATERIALS, AND COMMENTS 428 (2005).

92. For scholarship on the interpretation of GATT Article XX(b) and (g) in trade and environment disputes, see Steve Charnovitz, *Exploring the Environmental Exceptions in GATT Article XX*,

invoked GATT Article XX(d) and (j) in an unsuccessful attempt to defend the challenged LCRs in *India – Solar Cells*.⁹³

Therefore, this Article examines the applicability of four relevant GATT Article XX provisions—(b), (g), (d), and (j)—to the present case. These exceptions cover measures:

- (b) necessary to protect human, animal or plant life or health;
- (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption;
- (d) necessary to secure compliance with laws or regulations which are not inconsistent with the provisions of this Agreement, including those relating to customs enforcement, the enforcement of monopolies operated under paragraph 4 of Article II and Article XVII, the protection of patents, trade marks and copyrights, and the prevention of deceptive practices;
- (j) essential to the acquisition or distribution of products in general or local short supply; Provided that any such measures shall be consistent with the principle that all contracting parties are entitled to an equitable share of the international supply of such products, and that any such measures, which are inconsistent with the other provisions of the Agreement shall be discontinued as soon as the conditions giving rise to them have ceased to exist. The CONTRACTING PARTIES shall review the need for this subparagraph not later than 30 June 1960.⁹⁴

Whether the United Kingdom's LCRs can be justified under Article XX(b) depends provisionally on whether the challenged measures are "necessary to protect the human, animal or plant life or health." As the key term, "necessary" has received evolving GATT and WTO jurisprudence over the years, which demonstrates a higher degree of deference the adjudicating bodies have given to a Member's policy autonomy.⁹⁵ The term

25 J. WORLD TRADE 37 (1991); Thomas J. Schoenbaum, *International Trade and Protection of the Environment: The Continuing Search for Reconciliation*, 91 AM. J. INT'L L. 268 (1997); Steve Charnovitz, *The WTO's Environmental Progress*, 10 J. INT'L ECON. L. 685 (2007); Bradley Condon, *GATT Article XX and Proximity-of-Interest: Determining the Subject Matter of Paragraphs B and G*, 9 UCLA J. INT'L L. & FOREIGN AFF. 137 (2004); CHRISTIANE R. CONRAD, PROCESSES AND PRODUCTION METHODS (PMS) IN WTO LAW: INTERFACING TRADE AND SOCIAL GOALS (2011).

93. See Fang, *supra* note 16, at 52.

94. GATT, *supra* note 58, art. XX(b), (g), (d), (j).

95. Up to the release of the 2000 Appellate Body Report in *Korea – Various Measures on Beef*, the prevailing standard was the least trade-restrictiveness test. For a thorough discussion of the standard, see Jan Neumann & Elisabeth Turk, *Necessity Revisited: Proportionality in World Trade Organization Law After Korea – Beef, EC – Asbestos and EC – Sardines*, 37 J. WORLD TRADE 199 (2003).

of “necessary” comprises “a range of degrees of necessity,” with the lowest degree of necessity deemed as “making a contribution” to the policy objective pursued, and the highest degree as “indispensable to that objective, or of absolute necessity, or inevitable.”⁹⁶ Therefore, the determination of whether a measure is necessary involves “a process of weighing and balancing a series of factors” as a holistic tool to assess the necessity of a measure for achieving certain policy objectives.⁹⁷ It is relevant to consider three factors: the importance of the interests or values at stake, the extent to which the measures contribute to the achievement of their objective, and the measures’ trade restrictiveness.⁹⁸ Since LCRs are commonly used as renewable energy development measures, it could be argued that the interests at stake are the low-carbon economy transition and climate change mitigation. However, while decarbonizing the economy and addressing climate change are closely related to the protection of the human life or health, which is highly significant, LCRs’ contribution to the achievement of those objectives remains questionable, if not entirely negligible. The design and implementation of LCRs are more prominently oriented towards industrial objectives than towards environmental protection. As discussed previously, the direct effect of such measures might even be counterproductive, from an environmental perspective, since LCRs are likely to drive up the cost of renewable energy projects to the detriment of decarbonization.⁹⁹ Without demonstrating sufficient contribution to Article XX(b) objectives, LCRs would not be exonerated as “necessary to protect the human, animal or plant life or health.”

Another possible justification, XX(g), mandates that the measures “relat[e] to the conservation of exhaustible natural resources” and be “made effective in conjunction with restrictions on domestic production or consumption.”¹⁰⁰ Less stringent than XX(b)’s “necessary,” the legal standard in this provision, “relating to,” involves an examination of whether the design and structure of the measure are closely related to the goal of the measure.¹⁰¹ Although Article XX(g) has a narrow focus on the “conservation of exhaustible natural resources,” the scope of “exhaustible natural resources” could be interpreted quite broadly to accommodate the

96. Appellate Body Report, *Korea – Various Measures on Beef*, *supra* note 74, ¶¶ 160-61. Although the test was developed with respect to Article XX(d) only, the Appellate Body later extended the applicability of the test to Article XX(b). *See* Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, ¶ 182-83, WTO Doc. WT/DS332/AB/R (adopted Dec. 3, 2007) [hereinafter *Brazil – Retreaded Tyres*].

97. Appellate Body Report, *Korea – Various Measures on Beef*, *supra* note 74, ¶ 164.

98. *Brazil – Retreaded Tyres*, *supra* note 96, ¶ 178.

99. *See* Fang, *supra* note 16, at 42.

100. GATT, *supra* note 58, art. XX(g).

101. Appellate Body Report, *US – Shrimp*, *supra* note 89, ¶¶ 135-42.

environmental protection agenda.¹⁰² Thus, it could be argued that the aim of these LCRs was the conservation of clean air, which is a type of exhaustible natural resource explicitly acknowledged by the WTO's adjudicatory bodies in *US – Gasoline*.¹⁰³ But as in the analysis of the applicability of Article XX(b), it would be challenging to prove that the use of LCRs bears a close and rational relationship with the conservation of clean air when such measures do not necessarily facilitate the deployment of renewable energy projects. Only if LCRs bore a real and close nexus with the protection of clean air could Article XX(g) be available as a defense.

As the third potential justification, Article XX(d) exempts measures that are deemed necessary to comply with laws or regulations provided the laws and regulations are consistent with the GATT. An examination of a defence under the provision includes three key elements: whether there are in existence “laws or regulations” that are not inconsistent with the GATT; whether the measure found to violate GATT obligations is “designed to secure compliance with these laws or regulations”; and whether the measure found to violate GATT obligations is “necessary to secure such compliance.”¹⁰⁴

Regarding the first matter, it is not adequate for a defending Member to simply put forward a list of laws and regulations with no identification of any “specific rules, obligations or requirements” that the breaching measures are claimed to seek compliance with.¹⁰⁵ Instead, a defending Member must sufficiently explain the content of the rules purportedly embodied in the instruments relied upon to avail itself of Article XX(d). The Appellate Body in *India – Solar Cells* offered guidance on the characteristics of instrument(s) that can qualify a rule as eligible “laws or regulations.”¹⁰⁶ It is noteworthy that India's attempt to invoke its international legal obligations failed because the Appellate Body did not find sufficient evidence to support the idea that these international instruments constituted

102. *Id.* ¶¶ 129-30.

103. Panel Report, *United States – Standards for Reformulated and Conventional Gasoline*, ¶ 6.36, WTO Doc. WT/DS2/R (adopted Jan. 29, 1996) [hereinafter *US – Gasoline*].

104. Appellate Body Report, *Korea – Various Measures on Beef*, *supra* note 74, ¶ 54.

105. Panel Report, *Indonesia – Importation of Horticultural Products, Animals and Animal Products*, ¶ 7.594-95, WTO Doc. WT/DS477/R (adopted Dec. 22, 2016) [hereinafter *Indonesia – Import Licensing Regimes*].

106. The Appellate Body identified: “(i) the degree of normativity of the instrument and the extent to which the instrument operates to set out a rule of conduct or course of action that is to be observed within the domestic legal system of a Member; (ii) the degree of specificity of the relevant rule; (iii) whether the rule is legally enforceable, including, e.g. before a court of law; (iv) whether the rule has been adopted or recognized by a competent authority possessing the necessary powers under the domestic legal system of a Member; (v) the form and title given to any instrument or instruments containing the rule under the domestic legal system of a Member; and (vi) the penalties or sanctions that may accompany the relevant rule.” *India – Solar Cells*, *supra* note 81, ¶ 5.113.

rules that “formed part of India’s domestic legal system.”¹⁰⁷ Among the domestic instruments cited by India, the majority were found to be “hortatory, aspirational, declaratory, and at times solely descriptive,” and thus lacked “a sufficient degree of normativity and specificity.”¹⁰⁸ The other instrument cited, the 2003 Electricity Act, although highly normative and with binding effects, did not clarify the extent to which these domestic instruments were mandatory.¹⁰⁹

The United Kingdom is a party to a wide array of international environmental treaties that cover climate change issues,¹¹⁰ but it would be difficult for the country to establish that its obligations under these treaties form part of its domestic legal system, and that they therefore fall within the scope of “laws or regulations” under Article XX(d). The lack of a necessary level of normativity or enforceability seriously challenges the claim that these international environmental instruments are incorporated as part of the United Kingdom’s domestic legal system.

Among the United Kingdom’s domestic environmental laws or climate laws that might be potentially relevant for Article XX(d), the Climate Change Act, adopted in 2008, has established a comprehensive legislative and regulatory framework for climate change mitigation and adaptation.¹¹¹ The Act sets long-term greenhouse gas emission reduction goals and short-term interim targets that are binding on the UK government to achieve.¹¹²

While the Climate Change Act is sufficiently normative and enforceable for XX(d)’s first requirement, it is less clear whether the LCRs are meaningfully designed to “secure compliance with” the Act. The precision with which a defending Member can identify “specific rules, obligations, or requirements contained in the relevant laws or regulations” directly determines the likelihood that the Member can establish the sufficient degree of necessity that a breaching measure has to secure compliance with those laws or regulations.¹¹³ Therefore, it is necessary to assess whether the

107. India invoked the preamble of the WTO Agreement, the United Nations Framework Convention on Climate Change, the Rio Declaration on Environment and Development (1992), and UN Resolution A/RES/66/288 (2012). Although the Appellate Body found that the “international instruments and rules identified by India” were relevant to judicial reasoning and “guiding the exercise of the decision-making power” of the Central Government’s executive branch, it was still insufficient to such instruments to constitute “laws or regulations.” *Id.* ¶¶ 5.147-5.149.

108. *Id.* ¶ 5.133.

109. *Id.* ¶ 5.136.

110. Richard Macrory & Joe Newbigin, *Brexit and International Environmental Law*, CTR. FOR INT’L GOVERNANCE INNOVATION (2017), <https://www.cigionline.org/publications/brexit-and-international-environmental-law/>.

111. Climate Change Act, 2008 (c. 27) (U.K.); *The United Kingdom’s Pioneering Climate Change Act*, OECD (Oct. 6, 2021) <https://www.oecd.org/climate-action/ipac/practices/the-united-kingdom-s-pioneering-climate-change-act-c08c3d7a/>.

112. OECD, *supra* note 111.

113. *India – Solar Cells*, *supra* note 81, ¶ 5.108.

United Kingdom's LCRs could strengthen or reinforce its observance of the Climate Change Act. A review of the Climate Change Act reveals no provision mandating the use of LCRs. Instead, the major enforcement instrument is a set of trading schemes relating to greenhouse gas emissions.¹¹⁴ It would be hard to argue that mandating more favourable treatment of domestic offshore wind equipment manufacturers through the use of LCRs is a critical aspect of the Climate Change Act or other environmental legislation. Unless the United Kingdom introduces binding domestic legislation that explicitly promotes the domestic renewable energy manufacturing industry via the provision of more favourable treatment, the LCR scheme would be highly unlikely to receive justification via Article XX(d).

The invocation of the last potential exception—Article XX(j), which provides a carve-out for obligations when there is either a general or a local short supply of products—is more promising.¹¹⁵ The first step of Article XX(j) analysis is to identify what products are alleged to be in general or local short supply. It would be relevant to consider whether there is a general or local short supply of wind energy equipment in the United Kingdom, and what the actual conditions would be in which short supply is likely to occur. Admittedly, there are difficulties involved in interpreting when short supply conditions are sufficient to be covered under the provision. It is useful, in defining these conditions, to review the only renewable energy case, *India – Solar Cells*, that cited Article XX(j), and to deliberate the WTO adjudicatory bodies' interpretation of the provision.

Rejecting India's allegation that solar cells and modules were products in short supply in the country, the Appellate Body in *India – Solar Cells* laid out several requirements for products to qualify as those in short supply. The burden of proof is placed on the defending Member to provide that within the relevant geographical market, "the quantity of available supply from domestic and international sources" falls short of meeting demand.¹¹⁶ The absence of domestic manufacturing capacity does not, itself, render the product in general or local short supply, as long as international sources remain adequate to meet domestic demand.¹¹⁷ Although India contended that its dependence on imports would cause "risks associated with supply-side vulnerabilities and fluctuations," the Appellate Body did not equate the potential *risk* of short supply with actual *disruptions* to supply.¹¹⁸ As a result, India failed to present any evidence of actual disruption to the supply of

114. See Climate Change Act, 2008, *supra* note 111, pt. 3.

115. GATT, *supra* note 58, art. XX(j).

116. *India – Solar Cells*, *supra* note 81, ¶ 5.71.

117. *Id.* ¶ 5.69.

118. *Id.* ¶ 5.76.

“affordable foreign solar cells and modules.”¹¹⁹ Nevertheless, the Appellate Body recognized that it is appropriate to consider potential disruption risks to the availability of a given product in determining whether it is in short supply,¹²⁰ which sheds important light on a possible defence in *UK – C/D (EU)*.

The key concept of “products in general or local short supply” is not and should not be viewed as static, although the paradigmatic example of short supply is usually that of agricultural products or, to a lesser extent, natural resources.¹²¹ In certain emergent circumstances, almost any product may be susceptible to general or local short supply. A simple illustration here is that of the outbreak of COVID-19, which directly and/or indirectly led to severe shortages in many locations in the supply of personal protection equipment, masks, hand sanitizer, and even toilet paper.¹²² While the last was the result of a change in consumer buying habits (i.e., panic buying), draconian measures such as lockdowns to curb the spread of the virus severely disrupted supply chains across many sectors and led to temporary supply shortages across a wide range of products, including renewable energy equipment.¹²³ It is notable that certain unique features of renewable energy manufacturing, such as the “high concentration of raw materials,” “the limited number of players,” and environmental and social concerns, could add to the likelihood of supply chain disruptions and ensuing shortages in this sector.¹²⁴ High reliance on foreign products is a classic effect of economic globalisation, but it also makes the importer state vulnerable to supply disruptions triggered by a range of factors.¹²⁵

Apart from supply chain disruptions, a supply shortage in renewable energy equipment could also result from the dire imperative to scale up climate change-mitigating actions to avoid catastrophic impacts.

119. *Id.* ¶ 5.76.

120. *Id.* ¶ 5.76.

121. GATT, *supra* note 58, art. XX(j).

122. Blake Schmidt, *Shortages Rumours Spark Toilet Paper Panic Buying in Hong Kong*, BLOOMBERG (Feb. 5, 2020), <https://www.bloomberg.com/news/articles/2020-02-05/hong-kong-went-from-face-mask-shortage-to-run-on-toilet-paper#sj4y7vzkg>.

123. Research shows that “supply chain disruptions and halting of non-essential manufacturing activities have caused significant delays in the deployment of renewable energy projects.” See Anh Tuan Hoang et al., *Impacts of COVID-19 Pandemic on the Global Energy System and the Shift Progress to Renewable Energy: Opportunities, Challenges, and Policy Implications*, 154 ENERGY POL’Y 112322 (2021).

124. Elizabeth Forster et al., *Supply Chain Risks on Renewable Energy Projects*, FRESHFIELDS BRUCKHAUS DERINGER (Feb. 15, 2022), <https://sustainability.freshfields.com/post/102hipx/supply-chain-risks-on-renewable-energy-projects>. The rapidly rising shipping cost for containers leaving China and other major renewable energy-producing countries since 2020 is one of the primary reasons behind supply chain disruptions in the renewable energy sector. See Nicolas Rivero, *Here’s How Supply Chain Issues Are Affecting Renewable Energy Projects*, WORLD ECON. F., (Nov. 4, 2021) <https://www.weforum.org/agenda/2021/11/supply-chain-problems-solar-power-renewable-energy>.

125. Willy C. Shih, *Global Supply Chains in A Post-Pandemic World: Companies Need to Make Their Networks More Resilient. Here’s How*, 98 HARV. BUS. REV. 82 (2020).

Considering the scale and severity of the ongoing climate crisis, it could also be argued that the supply of renewable energy equipment, be it wind turbines or solar panels, is inadequate to sufficiently reduce carbon emissions.¹²⁶ The International Energy Agency points out that the global march toward renewable energy is still not happening sufficiently fast to avoid dangerous global warming, which would call for even more forceful policy measures.¹²⁷ As one of the world's largest contributors to climate change over time, the United Kingdom has the responsibility to take an active role to reduce carbon emissions.¹²⁸ Meanwhile, the United Kingdom has genuine and important reasons to cut imported fossil fuels from Russia and strengthen energy security following Russia's invasion of Ukraine.¹²⁹ If the United Kingdom decided to raise its current renewable energy deployment targets by a large extent, it is highly likely that the quantity of available wind energy equipment supply from both domestic and international sources would fall short, and the equipment would therefore meet the requirement that "products [be] in general or local short supply."¹³⁰ In this regard, evolving geopolitical tensions and the environmental crisis may in the future affect the conventional interpretation of "short supply" within the meaning of GATT Article XX(j).

Once the existence of short supply was established, the United Kingdom would have to satisfy the nexus requirement that LCRs be "essential to" the pursued objective.¹³¹ The jurisprudence on "essential" is basically non-existent, since the Appellate Body in *India – Solar Cells* did not proceed to consider the means-end relationship after rejecting India's claim of short supply. Nevertheless, the Appellate Body made several remarks that could shed light on its understanding of the phrase "essential to."¹³² Regarding whether a measure "essential to" a pursued objective has a higher or similar level of relatedness than a measure "necessary" to the objective, the Appellate Body explained that "essential" is located at least as close to

126. Asmelash, *supra* note 82, at 17.

127. See INT'L ENERGY AGENCY (IEA), WORLD ENERGY OUTLOOK 23 (2018).

128. The United Kingdom ranked fifth in cumulative carbon emissions from fossil fuel combustion worldwide from 1750 to 2020. See *Cumulative Carbon Emissions from Fossil Fuel Combustion Worldwide from 1750 to 2020, By Major Country*, STATISTA (2020), <https://www.statista.com/statistics/1007454/cumulative-co2-emissions-worldwide-by-country>.

129. The United Kingdom has introduced a number of sanctions against imported oil and coal from Russia. See Leigh T. Hansson et al., *Latest UK Sanctions Against Russia – Oil Ban, Insurance, Gold, Coal and Business Services*, REED SMITH (July 27, 2022), <https://www.reedsmith.com/en/perspectives/2022/07/latest-uk-sanctions-against-russia>.

130. GATT, *supra* note 58, art. XX(j).

131. *Id.* It should be noted that no other Article XX paragraph requires that a measure be essential to a specific objective in order to bypass GATT requirements.

132. *India – Solar Cells*, *supra* note 81, ¶¶ 5.62-5.63.

the “indispensable” end of the continuum as the word “necessary” is.¹³³ The process of “weighing and balancing” a series of factors is applicable in assessing whether a measure is “essential to” the pursued objective. Therefore, it is relevant to assess the extent to which the WTO-inconsistent measure contributes to “the acquisition or distribution of products in general or local short supply”; “the relative importance of the societal interests or values that the measure is intended to protect”; and “the trade-restrictiveness of the challenged measure.” In most cases, “a comparison between the challenged measure and reasonably available alternative measures should then be undertaken.”¹³⁴

Therefore, four questions arise in assessing whether the U.K. measures could be deemed “essential to” the pursued objectives. To what extent can LCRs contribute to alleviating or solving supply shortages? How important are the societal interests or values LCRs are designed to protect? How restrictive are the LCRs? Are there reasonably available alternatives to LCRs that could make a similar contribution to the pursued objectives? First, the effectiveness of LCRs in contributing to reducing or resolving supply shortages depends on whether and how much they could boost domestic manufacturing capacity. Kuntze and Moerehout’s research identifies five factors necessary for LCRs to bring value to their host economy – “market size and stability,” “the restrictiveness of LCRs,” “cooperation and financial incentives,” “learning-by-doing potential,” and “degree of current technological knowledge.”¹³⁵ There is evidence from some jurisdictions that LCRs can promote short-term increases in domestic renewable energy manufacturing capacity, despite the higher cost of domestically manufactured equipment.¹³⁶ Second, addressing supply shortages in renewable energy equipment with LCRs can serve a multitude of objectives, such as shielding supply chains from disruption, scaling up climate ambition, and strengthening energy security. These policy objectives that LCRs aim to protect are significant, especially given the environmental and geopolitical imperative to transition to a low-carbon economy. Third, the trade restrictiveness of LCRs depends on the proportion of required local content. The higher the percentages of local content required, the more trade

133. *Id.* The Appellate Body pointed out that the plain meaning of the term “essential” is “absolutely indispensable or necessary.”

134. *Id.* ¶ 5.59.

135. KUNTZE & MOERENHOUT, *supra* note 9.

136. See Benedict Probst et al., *The Short-Term Costs of Local Content Requirements in the Indian Solar Auctions*, 5 NATURE ENERGY 842 (2020).

restrictive a set of LCRs are. In the United Kingdom's case, the setting of LCRs at sixty percent is highly trade-restrictive.¹³⁷

But to the fourth question, it is largely uncertain whether it would be possible to formulate less trade-restrictive measures that could make a similar contribution to the objectives listed above as LCRs could, at least in the short term. When facing a supply shortage of certain products and an imperative to increase homegrown capacity to shield against future disruptions or diversify from unreliable suppliers, even the use of highly trade-restrictive measures such as LCRs might be legitimate under XX(j). Because of the dramatic circumstances that could potentially face people affected by a true supply shortage, and the responsibility of the government to address this possibility, the WTO would likely offer a high degree of deference to the relevant government in such circumstances.¹³⁸

If LCRs are provisionally justified by GATT Article XX(j), the next step is to conduct the chapeau test as required by the introductory paragraph to GATT Article XX:

such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.¹³⁹

Rather than creating precisely defined requirements, the chapeau uses generic terms and concepts, which explains why the Appellate Body has consistently underscored the importance of the purpose underlying the chapeau when interpreting it.¹⁴⁰ The chapeau reflects “the need to maintain a balance of rights and obligations between the right of a Member to invoke one or another of the exceptions of Article XX . . . on the one hand, and the substantive rights of the other Members under the GATT 1994, on the

137. Henry Edwardes-Evans, *UK's Fourth CfD Renewable Energy Auction in Late 2021 to Aim for 12 GW*, S&P GLOB. COMMODITY INSIGHTS (Nov. 24, 2020) <https://www.spglobal.com/commodity-insights/en/market-insights/latest-news/electric-power/112420-uks-fourth-cfd-renewable-energy-auction-in-late-2021-to-aim-for-12-gw>.

138. Ben Sharp, *Responding Internationally to A Resource Crisis: Interpreting the GATT Article XX(j) Short Supply Exception*, 15 DRAKE J. OF AGRIC. L. 259, 272 (2010).

139. For a scholarly discussion of the interpretation of the chapeau, see Sanford Gaines, *The WTO's Reading of the GATT Article XX Chapeau: A Disguised Restriction on Environmental Measures*, 22 U. PENN. J. INT'L ECON. L. 739 (2001); Lorand Bartels, *The Chapeau of the General Exceptions in the WTO GATT and GATS Agreements: A Reconstruction*, 109 AM. J. INT'L L. 95 (2015); Arwel Davies, *Interpreting the Chapeau of GATT Article XX in Light of the 'New' Approach in Brazil – Tyres*, 43 J. WORLD TRADE 507 (2009).

140. Donald McRae, *GATT Article XX and the WTO Appellate Body*, in *NEW DIRECTIONS IN INT'L ECON. L.: ESSAYS IN HONOUR OF JOHN H. JACKSON* 219, 235 (Marco Bronckers & Reinhard Quick eds., 2000).

other hand.”¹⁴¹ The purpose of the chapeau is to “prevent measures justified by the general exceptions from being misused or abused.”¹⁴²

There are three conditions in the Article XX chapeau that would render illegitimate a measure otherwise justified as an exception under XX(j): “arbitrary discrimination between countries where the same conditions prevail,” “unjustifiable discrimination between countries where the same conditions prevail,” and the use of a measure as a “disguised restriction on international trade.”¹⁴³ The language of the chapeau is broad, and the differences between the three conditions are often difficult to distinguish, posing challenges to interpretation.¹⁴⁴ The existing jurisprudence implies that there is considerable overlap in the two non-discrimination requirements, which are closely interrelated.¹⁴⁵ Discrimination that is arbitrary would in most cases also be unjustifiable. The less-elaborated aspect, a “disguised restriction,” arguably encompasses measures with “hidden features” that grant privileges or favours to domestic producers.¹⁴⁶ Nevertheless, a measure that does not restrict international trade in a disguised way can still fall into the scope of unjustifiable discrimination.

Therefore, whether the United Kingdom could avail itself of Article XX(j) would essentially depend on whether or not LCRs constitute “unjustifiable discrimination between countries where the same conditions prevail.”¹⁴⁷ The extent to which LCRs might serve as “unjustifiable” discrimination requires consideration of whether the reasons given for the discrimination have any rational connection to the objectives of Article XX(j).¹⁴⁸ If the reasons underlying the United Kingdom’s use of LCRs are

141. *US – Shrimp*, *supra* note 89, ¶ 156.

142. Appellate Body Report, *US – Standards for Reformulated and Conventional Gasoline*, WTO Doc. WT/DS2/AB/R ¶ 22 (adopted Apr. 29, 1996).

143. *Gaines*, *supra* note 139, at 772.

144. *CONRAD*, *supra* note 92, at 350-51.

145. The Appellate Body noted that “a single, rigid and unbending requirement” imposed by the US in the administration of certification processes constituted “arbitrary discrimination.” See *US – Shrimp*, *supra* note 89, ¶ 177.

146. Reinhard Quick, *The Community’s Regulation on Leg-Hold Traps: Creative Unilateralism Made Compatible with WTO Law through Bilateral Negotiations?*, in *NEW DIRECTIONS IN INTERNATIONAL ECONOMIC LAW: ESSAYS IN HONOUR OF JOHN H. JACKSON* 239, 255 (2000).

147. There is no need to assess whether the U.K. LCRs would constitute a “disguised restriction,” because a challenged measure does not need to meet the Chapeau requirements accumulatively to be deemed as inconsistent with the Chapeau. This Part focuses on if the U.K. LCRs constitute “unjustifiable discrimination.” Only when the challenged measure does not constitute “unjustifiable discrimination,” it is needed to examine if the measure is “a disguised restriction” on international trade. See *GATT*, *supra* note 58, art. XX chapeau.

148. *Brazil – Retreaded Tyres*, *supra* note 96, ¶ 227. Davies points out that the concept of “unjustifiable discrimination” under the chapeau is connected to the policy goals under which a measure can be provisionally justified: “A useful shorthand version of the test is that there will be ‘unjustifiable’ discrimination in the absence of a ‘rational connection’ between the reasons for the discrimination, and the objectives reflected in the heads of provisional justification.” Davies, *supra* note 139, at 520.

legitimately connected with addressing supply shortages covered by Article XX(j), there will be no misuse or abuse of the exception. However, without establishing that the rationale for the discriminatory measures at issue are genuinely and rationally related to the objectives reflected in Article XX(j), the United Kingdom will not pass the WTO's scrutiny.

The inherently discriminatory nature of LCRs might speak to the low likelihood of such measures passing the chapeau requirements. Nevertheless, it is not entirely impossible to build a rational connection between LCRs and the objective of solving supply shortages. Particularly at a time when the supply of foreign-produced renewable energy equipment is increasingly susceptible to a range of disruptions, including those induced by geopolitical tensions, it is likely to be more critical than ever to ensure the stability and reliability of the domestic supply.¹⁴⁹ As politically popular measures, LCRs have appealed to domestic constituents, and to protected industries in particular, rendering passage and enactment of LCRs relatively easy with sufficient support from different stakeholders.¹⁵⁰ In other words, “less trade-restrictive alternatives” with no trade discriminatory elements might not be politically feasible and thus, not realistically available to a defending Member that wishes to build a reliable domestic supply chain of renewable energy equipment within a short timeframe.¹⁵¹ As a result, LCR discrimination against foreign suppliers might be deemed justified under exceptional circumstances.

Ultimately, an examination of WTO rules and jurisprudence reveals that LCRs are unlikely to be found justified under Article XX, and therefore would not likely be deemed consistent with the national treatment principle. However, rapidly evolving environmental and geopolitical circumstances are likely to contribute to a new and broadened understanding of “short supply” under GATT Article XX(j). The importance of solving such shortages could provide Members with more policy space in which otherwise WTO-inconsistent measures could develop local capacities to ensure an adequate supply of certain products. By that time, it might not be entirely impossible to justify the use of LCRs in the renewable energy sector under GATT Article XX(j).

B. Why did the EU Raise Only One Legal Claim Against the United Kingdom in the Complaint?

149. Alberto Bettoli, et al., *Renewable-energy Development in A Net-Zero World: Disrupted Supply Chains*, MCKINSEY & COMPANY (Feb. 17, 2023), <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/renewable-energy-development-in-a-net-zero-world-disrupted-supply-chains>.

150. KUNTZE & MOERENHOUT, *supra* note 9, at 6.

151. *Brazil – Retreaded Tyres*, *supra* note 96, ¶ 156.

Several WTO agreements—the GATT, SCM Agreement, and TRIMs—are relevant to the legality of LCRs in renewable energy supportive mechanisms (see Table 1). While previous disputes concerning LCRs have raised several claims under various agreements, the EU raised only one legal claim in *UK – CfD (EU)*. It is increasingly common for complainants to raise multiple claims to maximize the chance of prevailing in a dispute.¹⁵² Therefore, it is potentially significant that the EU did not also challenge the U.K. measures under the SCM Agreement or TRIMs, and raises the question of whether the single legal claim in *UK – CfD (EU)* might have any longer-term or systemic implications. This section contends that there are distinct explanations for and implications of the omissions of claims under the SCM Agreement and TRIMs, respectively.

The reason for the EU’s omission of a legal claim under TRIMs Article 2.1 is fairly simple: the provision simply prohibits TRIMs inconsistent with GATT Article III:4.¹⁵³ The TRIMs Article 2.2 list of examples of violations and other existing jurisprudence confirm that a breach of GATT Article III:4 would automatically violate TRIMs Article 2.1.¹⁵⁴ Therefore, an additional claim raised pursuant to TRIMs would not have changed the legal result of *UK – CfD (EU)*.

However, there are more complicated reasons that attributed to the EU’s avoidance of a claim about the inconsistency of the CfD scheme with WTO subsidy rules administered by the SCM Agreement, and they merit careful analysis. Although the absence of a legal claim made pursuant to the SCM Agreement might be surprising at first glance, the EU’s decision is not inexplicable.¹⁵⁵ This section proposes two primary reasons for the omission of a subsidy claim in *UK – CfD (EU)*.

The first reason relates to existing WTO jurisprudence, which has signalled that it remains highly burdensome, if not impossible, to even prove that certain types of government support for renewable energy-sourced power, such as feed-in tariffs, fall within the scope of subsidies pursuant to

152. A greater number of claims raised per dispute is one of the reasons that the WTO dispute settlement has experienced a considerable slowdown in recent years. See James Bacchus & Simon Lester, *Trade Justice Delayed Is Trade Justice Denied: How to Make WTO Dispute Settlement Faster and More Effective*, CATO INST. (Nov. 20, 2019), <https://www.cato.org/free-trade-bulletin/trade-justice-delayed-trade-justice-denied-how-make-wto-dispute-settlement>.

153. TRIMs Agreement, *supra* note 64, art. 2.1.

154. *Id.* art. 2.2 (providing an illustrative list of TRIMs, which includes LCRs that are inconsistent with GATT Article III:4); *but see* GATT, *supra* note 58, art. III:4.

155. Jonathan Branton, Bogdan Evtimov & Alexander Rose, *Trade Disputes: EU Launches Landmark WTO Complaint Against the UK for Alleged Discriminatory Practices in the Award of Offshore Wind Sector Subsidies*, DWF GROUP (Apr. 21, 2022), <https://dwfgroup.com/en/news-and-insights/insights/2022/4/eu-launches-landmark-wto-complaint-against-the-uk>.

the SCM Agreement.¹⁵⁶ The “legal acrobatics” performed by the Appellate Body in the first major renewable energy dispute (*Canada – FIT/Renewable Energy*) have created an extremely complex standard in terms of establishing the existence of a “benefit,” which is a key definitional component of a subsidy under the SCM Agreement.¹⁵⁷ Without demonstrating that a challenged renewable energy measure meets the definitional requirements of a subsidy, a complaining Member would fail to make a case under the SCM Agreement. The deterrent effects of the Appellate Body’s legal reasoning in that case are observable in subsequent renewable energy disputes. For instance, the United States, as the complainant, withdrew its subsidy claim in *India – Solar Cells* during the panel stage.¹⁵⁸ In *US – Renewable Energy*, the panel exercised judicial economy and did not make any decision concerning the subsidy issue.¹⁵⁹ As of this writing, the WTO adjudicating bodies have not ruled any challenged renewable energy support measure as incompatible with the SCM Agreement. Therefore, the EU’s choice to not make a legal claim under the SCM Agreement reflects its concern of not being able to successfully challenge the existing jurisprudence in this area.

The second reason the EU likely did not make a claim under the SCM Agreement is the European Commission’s endorsement of the CfD scheme

156. For a detailed discussion of relevant WTO jurisprudence, see, for example, Aaron Cosbey & Petros C. Mavroidis, *A Turquoise Mess: Green Subsidies, Blue Industrial Policy and Renewable Energy: The Case for Redrafting the Subsidies Agreement of the WTO*, 17 J. INT’L ECON. L. 11 (2014); Aaron Cosbey & Luca Rubini, *Does It FIT? An Assessment of the Effectiveness of Renewable Energy Measures and of the Implications of the Canada – Renewable Energy/FIT Disputes*, E15 INITIATIVE (2013), <http://e15initiative.org/wp-content/uploads/2015/09/E15-Clean-Energy-Technologies-CosbeyRubini-FINAL.pdf>; Luca Rubini, *The Good, the Bad, and the Ugly: Lessons on Methodology in Legal Analysis from the Recent WTO Litigation on Renewable Energy Subsidies*, 48 J. WORLD TRADE 895 (2014); Samuel Griffin, *The World Trade Organization: A Barrier to Green Energy*, 22 TRANSNAT’L L. & CONTEMP. PROBS. 205 (2013); Rajih Pal, *Has the Appellate Body’s Decision in Canada-Renewable Energy/Canada-Feed-in Tariff Program Opened the Door for Production Subsidies?*, 17 J. INT’L ECON. L. 125 (2014); Henrik Andersen, *Protection of Non-Trade Values in WTO Appellate Body Jurisprudence: Exceptions, Economic Arguments, and Eluding Questions*, 18 J. INT’L ECON. L. 383 (2015); Sherzod Shadikhodjaev, *First WTO Judicial Review of Climate Change Subsidy Issues*, 107 AM. J. INT’L L. 864 (2013); Iria Espa & García Durán, *Renewable Energy Subsidies and WTO Law: Time to Rethink the Case for Reform Beyond Canada – Renewable Energy/Fit Program*, 21 J. INT’L ECON. L. 621 (2018); Steve Charnovitz & Carolyn Fischer, *Canada – Renewable Energy: Implications for WTO Law on Green and Not-So-Green Subsidies*, 14 WORLD TRADE REV. 177 (2015); Marianna Karttunen & Michael Moore, *India-Solar Cells: Trade Rules, Climate Policy, and Sustainable Development Goals*, 17 WORLD TRADE REV. 215 (2018).

157. See Cosbey & Mavroidis, *supra* note 156, at 45.

158. The U.S. in its “first request for consultations” cited the SCM Agreement Articles 4, 7 and 30 to argue the potential inconsistencies of the Indian’s renewable energy measures with that Agreement. However, in the second request for consultations, the U.S. did not make any claim pursuant to the SCM Agreement. See Panel Report, *India – Solar Cells*, ¶ 1.1, WTO Doc. WT/DS456/R (adopted Oct. 14, 2016). The U.S. withdrawal of subsidy claim took place right after the circulation of the Appellate Body Report of *Canada – FIT/Renewable Energy* on May 24, 2013.

159. Panel Report, *United States – Certain Measures Relating to the Renewable Energy Sector*, ¶ 8.5, WTO Doc. WT/DS510/R (circulated June 27, 2019) [hereinafter *US–Renewable Energy*]. The US notified the WTO Dispute Settlement Body of its decision to appeal the panel decisions to the Appellate Body on Aug. 15, 2019. Therefore, the dispute has been pending since then.

as lawful State Aid in 2014.¹⁶⁰ If a panel were to determine that the U.K. scheme is an illegal subsidy, it would throw the EU's own ruling into serious question.¹⁶¹ Moreover, it is not uncommon for EU member states to provide government support to increase the penetration of renewable energy.¹⁶² For instance, France has established similar support measures for wind farms which incorporate LCRs as best practices or voluntary commitments.¹⁶³ Hence, it might not be in the EU's interest to risk a WTO ruling that such measures are actionable—or even prohibited—subsidies.¹⁶⁴ Had the WTO decided that the U.K. measures constituted subsidies and was challengeable, the policy space left to the EU member states for developing renewable energy projects with government supportive measures would be largely squeezed.

As the only WTO renewable energy dispute containing just a single legal claim, *UK – C/D (EU)* raises interesting questions concerning the EU's litigation strategy of striking down the blatantly discriminatory components of the challenged measures without generating collateral damage. Largely due to WTO jurisprudence developed over the past decade, the EU preferred not to raise a subsidy claim that would be fraught with uncertainties as well as the risk of backfire.¹⁶⁵ This has significant implications for the interplay between WTO rules governing the use of subsidies and renewable energy supportive measures. However, it is not clear to what extent and for how long this delicate shield singlehandedly created by WTO adjudicators can prevent renewable energy support measures from falling within the scope of illegitimate subsidies. Trade adjudicators have missed an opportunity to re-evaluate the nature of renewable energy support measures under the SCM Agreement. Consequently, the jurisprudential puzzles and uncertainties left since *Canada – FTT/Renewable Energy* will continue.

C. Why did the United Kingdom Offer a Mutually Agreeable Solution Without Proceeding to the Panel Stage?

160. *State Aid: Commission Authorises UK Aid Package for Renewable Electricity Production*, EUROPEAN COMMISSION (July 23, 2022), https://ec.europa.eu/commission/presscorner/detail/en/IP_14_866.

161. Marc L. Busch, *EU – UK Green Energy Dispute Sends Clear Message to Global Economy*, HILL (Sept. 7, 2022), <https://thehill.com/opinion/international/3550629-eu-uk-green-energy-dispute-send-clear-message-to-global-economy>.

162. Branton, Evtimov & Rose, *supra* note 155.

163. *See France Commits to 40 GW Offshore Wind By 2050*, WIND EUROPE (Mar. 31, 2022), <https://windeurope.org/newsroom/news/france-commits-to-40-gw-offshore-wind-by-2050/>.

164. *See* SCM Agreement, *supra* note 6565, art. 4.7 (according to the Agreement, if the dispute settlement procedure confirms that the subsidy is prohibited, it must be withdrawn immediately).

165. *See* Busch, *supra* note 161.

Despite its initial commitment to “rigorously contesting the EU’s challenge,” the United Kingdom quickly reversed course and agreed to remove the local content level requirement in the CfD scheme, a mutually agreeable solution that terminated the dispute prior to the panel stage.¹⁶⁶ This result is encouraged at the WTO, and many disputes end at this stage without the need to proceed to a panel.¹⁶⁷ However, Members’ propensity to reach an amicable solution appears to be very low in most WTO renewable energy disputes; in fact, this has only occurred once previously, when China withdrew its challenged LCRs during the consultations with the United States in *China – Wind Power Equipment*.¹⁶⁸

A comparison of the facts in *China – Wind Power Equipment* with those in *UK – CfD (EU)* reveals notable differences relevant to our discussion. In the former dispute, when China chose to remove the contested LCRs from its wind energy support program, it had already used the measures for years, and had achieved its goal of scaling up domestic wind energy equipment manufacturing capacity.¹⁶⁹ In other words, the policy aim of the deployment of LCRs in the wind sector had already been achieved before the Chinese government agreed to remove the measures. In contrast, the period from the United Kingdom’s incorporation of LCRs in the CfD scheme to the point when it agreed to no longer use these measures was simply too short to effectively boost domestic manufacturing capacity. The U.K. government’s willingness to immediately withdraw the challenged measures before they had produced any tangible benefits for domestic manufacturers merits attention.

Had the United Kingdom chosen not to withdraw the contested measures, but rather to continue with the dispute settlement proceedings, a panel would have been established to hear the case.¹⁷⁰ If the panel had found the U.K. measures inconsistent with GATT Article III:4, the United Kingdom would have had three options. First, the United Kingdom could have followed the panel’s recommendation and removed the LCRs; second, the United Kingdom could have maintained the LCRs and faced possible EU retaliation; or third, the United Kingdom could have appealed the

166. See Letter from Anne-Marie Trevelyan, *supra* note 4.

167. Research shows that nearly two-thirds of all WTO disputes ended at the stage of consultations in the early years and around half in recent years. Bernard M. Hokeman, Petros C. Mavroidis & Maarja Saluste, *Informing WTO Reform: Dispute Settlement Performance, 1995-2020*, 55 J. WORLD TRADE 1, 26 (2021).

168. See *China–Measures Concerning Wind Power Equipment*, *supra* note 7.

169. Seung-Youn Oh, *How China Outsmarts WTO Rulings in the Wind Industry*, 55 ASIAN SURV. 1116, 1137 (2015).

170. See *The Process – Stages in A Typical WTO Dispute Settlement Case*, WORLD TRADE ORG., https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c6s1p1_e.htm#:~:text=There%20are%20three%20main%20stages,by%20the%20losing%20party%20to (last visited Feb. 18, 2023).

panel's ruling to the Appellate Body. All three options, and particularly the third, would have allowed the United Kingdom to use LCRs for a considerably longer period without facing *de facto* legal consequences, given the WTO's lack of retrospective remedy.¹⁷¹

The United Kingdom's decision not to defend the challenged measures in *UK – CfD (EU)* in front of the panel is therefore somewhat surprising. This section offers several possible explanations for the United Kingdom's decision and discusses their implications. First, WTO jurisprudence is abundantly clear that the use of LCRs is inconsistent with the trade rules, and it is nearly impossible to justify the inconsistency.¹⁷² It is not uncommon for a Member to agree to amend its measures if it foresees that there is only a dim prospect of prevailing in a WTO dispute. Second, it is also possible that U.K. policymakers used the external pressure arising from the WTO complaint to fend off domestic protectionist pressures coming from trade unions and industry lobbyists.¹⁷³ As discussed above, the government's revision of the CfD scheme to include LCRs took place during a period when public pressure for industry protection was mounting. Being challenged by the EU may have provided the United Kingdom with a legitimate reason to abandon its protectionist measures.

The United Kingdom's willingness to offer diplomatic compromise came at a notable time in which its bilateral trade relationship with the EU was fraught with challenges following Brexit and disagreements on the implementation of the Northern Ireland Protocol.¹⁷⁴ At the same time, the WTO is undergoing a systemic crisis (including but not limited to its lack of a properly functioning Appellate Body), which undermines the system's certainty and stability.¹⁷⁵ Against this background, the amicable solution to

171. Assuming the panel report would be adopted, the United Kingdom would be given a reasonable period to bring its measures into compliance with the WTO rules. The WTO remedy system provides the "stall-and-withdraw" loophole that is not infrequently used by the losing parties. See Rachel Brewster, *Shadow Unilateralism: Enforcing International Trade Law at the WTO*, 30 J. INT'L ECON. L. 1133, 1134 (2009). If the United Kingdom chose to appeal the panel decision to the Appellate Body, there would be no binding effects of the panel report and the time frame for the U.K. to remove the contested measures would be unclear.

172. See Fang, *supra* note 16, at 61.

173. Scholarship discussing WTO agreements serving as a source of external pressure to assist domestic regulators to resist protectionist policies and make trade policy commitments can be found. Robert W. Staiger & Guido Tabellini, *Do GATT Rules Help Governments Make Domestic Commitments*, 11 ECO. & POL. 109 (1999); Susan Ariel Aaronson & M. Rodwan Abouharb, *Does the WTO Help Member States Improve Governance*, 13 WORLD TRADE REV. 547 (2014).

174. Joe Marshall & Jess Sargeant, *Northern Ireland Protocol: Ongoing UK-EU Disagreements*, INST. FOR GOV. (June 24, 2021) <https://www.instituteforgovernment.org.uk/explainer/northern-ireland-protocol-ongoing-disagreements>.

175. See, e.g., Tetyana Payosova, Gary Clyde Hufbauer & Jeffrey J. Scott, *The Dispute Settlement Crisis in the World Trade Organization: Causes and Cures*, PETERSON INST. FOR INT'L ECON. (2018), <https://www.piie.com/publications/policy-briefs/dispute-settlement-crisis-world-trade->

the *UK – CfD (EU)* dispute is laudable from multiple perspectives. The agreement can help to smooth the trade relationship between the United Kingdom and the EU, as any protracted WTO dispute between the two sides would only deteriorate an already complicated and fragile relationship, and the United Kingdom demonstrated sufficient deference to the rules-based multilateral trade system by removing its barely-defensible measures, validating the impact of the dispute settlement system and its judicial decisions.

D. Why did the EU Choose the WTO Dispute Settlement System as the Forum to Raise the Complaint?

It might seem surprising that the EU challenged the CfD scheme under the WTO dispute settlement system, given the existence of the newly-established EU-U.K. TCA, which can also deal with bilateral disputes.¹⁷⁶ Since the EU focused only on the United Kingdom, it might have made more sense to take recourse to the TCA, which explicitly prohibits LCRs and can be more expeditious, since the system can prevent third countries from joining in the dispute.¹⁷⁷ Instead of choosing an administratively expedient venue to resolve the conflict, however, the EU filed its complaint with the WTO dispute settlement system regardless of associated uncertainties, including but not limited to the Appellate Body's paralysis.¹⁷⁸

The implications of challenging a trading partner under the multilateral trading system are more far-reaching than those of doing so under a bilateral trade agreement. It is also reasonable to assume that it was not the EU's plan to focus only on the United Kingdom's measure. In other words, perhaps the EU was more confident that the WTO would come closest to the EU's ideal decision-making and interpretation, but it is also likely that the decision itself was not the sole decisive factor affecting the choice of forum. As Busch posited, it could be argued that the EU's recourse to the WTO dispute settlement rather than the EU-U.K. TCA reveals the EU's intention to alert third parties, or even the global economy as a whole, of the unlawfulness of LCRs in the renewable energy sector.¹⁷⁹ The visibility of filing a case at the WTO is likely higher than that of doing so under any bilateral trade deal. During an era in which countries are fiercely competing for technological leadership in a wide range of sectors, deference to the rules

organization-causes-and-cures; Matteo Fiorini et al., *WTO Dispute Settlement and the Appellate Body Crisis: Insider Perceptions and Members' Revealed Preference*, 54 J. WORLD TRADE 667, (2020).

176. Busch, *supra* note 161.

177. *Id.*

178. *Id.*

179. *Id.*

of the multilateral trading system is unfortunately undervalued. Therefore, the EU's focus likely extends beyond the United Kingdom to a larger scope of countries that may be planning to achieve industrial objectives without keeping their trade obligations in mind.¹⁸⁰

Filing a dispute at the WTO also demonstrates the EU's faith in the WTO system, which is particularly crucial during a time when scepticism around multilateralism and binding dispute settlement has been increasing. As discussed in Part III.2, the single legal claim made by the EU testifies to the impact of the WTO's jurisprudence. The EU's choice of the WTO as the forum for dispute resolution may contribute to the WTO's institutional legitimacy and effectiveness as well as hinting at the need to overcome the current impasse and fully restore its dispute settlement function. The salience of a compulsory, impartial, and enforceable dispute settlement system in preserving and even promoting multilateral trade cooperation is more pronounced in uncertain times.¹⁸¹

III. REFLECTIONS, RECOMMENDATIONS, AND CONCLUSIONS

A. Reflections

As a new addition to the large body of renewable energy disputes under the WTO, *UK – C/D (EU)* testifies to the escalation of global competition in the rapidly expanding market for renewable energy technologies. Responding to the economic slowdown induced by COVID-19 and other geopolitical disruptions, a wide range of countries, even those that have traditionally advanced a relatively liberal and *laissez-faire* economic model, have been unable to resist pursuing industrial objectives.¹⁸² There is every indication that countries will continue their efforts to advance national competitiveness and boost economic growth in the renewable energy sector with industrial policy. As a result, it remains largely uncertain whether efforts to curb trade disputes in the renewable energy sector will be successful.

Despite its short-lived nature, *UK – C/D (EU)* has sent important signals to the global economy, and particularly to those countries that already have high economic stakes in, or plans to increase government interventions in, renewable energy industries. First, it is abundantly clear that LCRs constitute a breach of the national treatment principle, and that they are very hard to justify or exonerate through the use of a treaty exception. That being said,

180. *Id.*

181. Robert McDougall, *The Crisis in WTO Dispute Settlement: Fixing Birth Defects to Restore Balance*, 52 J. WORLD TRADE 867, 896 (2018).

182. Stephen Olson, *Will COVID-19 Bring Industrial Policy Back in Vogue?*, DIPLOMAT, (May 20, 2020), <https://thediplomat.com/2020/05/will-covid-19-bring-industrial-policy-back-in-vogue/>.

GATT Article XX(j) provides a potential defence when the supply of renewable energy technologies falls short of the demand, which could potentially be triggered by disruptions to the supply chain or worsening global warming. Developing local capacities in manufacturing renewable energy products— even when done via trade-discriminatory measures— rather than relying on foreign sources may be the only practical or feasible option under exceptional circumstances. Additionally, the shelter created by the WTO Appellate Body to protect renewable energy support measures from being deemed illegal subsidies remains in effect, but to what extent and for how long this judicially-created policy space will remain is uncertain.¹⁸³

While the outcome of *UK – CfD (EU)* might dampen policymakers’ hopes of advancing industrial interests during the transition to a low-carbon energy economy without provoking a trade dispute or running afoul of WTO rules, this Article takes a more nuanced approach. WTO rules in general do indeed impose a strict rule on the use of trade-restrictive industrial policies.¹⁸⁴ However, not all policy instruments combining decarbonization and industrialization would fail the WTO’s scrutiny. Instead of simply resorting to politically appealing measures such as LCRs, it is critical for policymakers to diagnose the underlying problems restricting the growth of domestic industry’s capacity and to tailor policy instruments accordingly. In the case of the United Kingdom’s offshore wind industry, the efficacy of simply inserting LCRs in the CfD scheme to advance industrial objectives is highly questionable when other barriers to scaling up manufacturing capacity, such as infrastructure underdevelopment, have not been properly resolved. Nor is it likely that LCRs are the solution to existing barriers. Given that the United Kingdom’s local wind turbine supplies are higher in price and lower in efficiency than foreign supplies, imposing LCRs would quickly drive up the total cost of building offshore wind projects with no guaranteed enhancement in domestic manufacturing capacity. Consequently, the penetration of wind power might even have to slow down, which ultimately would make the transition to a secure supply of renewable energy more difficult. Withdrawing the challenged measures in *UK – CfD (EU)* will push the U.K. government to reassess the market dynamics and

183. Ideally, the WTO would be the body responsible for amending the existing rules, but this is not currently feasible. For an analysis of why the WTO’s negotiation function has experienced difficulties, see BERNARD M. HOEKMAN ET AL., REVITALIZING MULTILATERAL GOVERNANCE AT THE WORLD TRADE ORGANISATION: REPORT OF THE HIGH-LEVEL BOARD OF EXPERTS ON THE FUTURE OF GLOBAL TRADE GOVERNANCE, (Bertelsmann Stiftung 2018), https://www.wto.org/english/news_e/news18_e/bertelsmann_rpt_e.pdf.

184. Keun Lee et al., *How Large or Small is the Policy Space? WTO Regime and Industrial Policy*, 27 SEUL J. OF ECO. 307, 310 (2014).

set a different, and hopefully more effective, set of policy measures to develop the homegrown wind energy equipment manufacturing sector.

B. Recommendations

This Article offers three options to U.K. policymakers in particular and WTO Members in general who aim to achieve dual decarbonization and industrialization objectives in the wind energy sector without running afoul of WTO rules. First, setting adequately ambitious but achievable energy deployment targets is critical, as it can help give all wind industry stakeholders more confidence in the growth of a sustained market.¹⁸⁵ The level of ambition in these targets should not be static, but rather adjustable, preferably growing along with the increasing maturity of renewable energy technologies and declining cost. For instance, the existing U.K. target for floating offshore wind energy by 2030 has been criticized as “not enough” to sufficiently incentivize the anchor investments.¹⁸⁶ U.K. industry stakeholders are concerned with the lack of a steady chain of projects, which would be central to sustained growth of the local equipment manufacturing industry.¹⁸⁷ Effective target-setting requires policymakers to closely monitor renewable energy market dynamics and effectively integrate the targets into the broad policy framework.

Second, upgrading ailing infrastructure and developing new facilities is integral to attracting more investment and boosting domestic wind energy equipment manufacturing capacity. Developing a domestic supply chain and an extended ecosystem of companies to enhance the competitiveness of wind energy equipment manufacturers is unrealistic without modern and efficient infrastructure. Governments can deploy an array of policy measures, such as tax rebates, subsidies, and public-private partnerships that would not risk violating the WTO rules if designed in a non-discriminatory manner. Furthermore, infrastructure investment has great potential to create local jobs and promote new technologies.¹⁸⁸

Third, in awarding contracts to offshore wind energy projects, policymakers can gradually move away from evaluating them solely on the

185. Ghislaine Kieffer & Toby D. Couture, *Renewable Energy Target Setting*, INT’L RENEWABLE ENERGY AGENCY (IRENA) 60 (2015), <https://www.irena.org/publications/2015/Jun/Renewable-Energy-Target-Setting>.

186. Andrew Lee, *UK Floating Wind Target ‘Not Enough’ As Industry Urges 20GW Ambition*, RECHARGE (Sept. 15, 2021), <https://www.rechargenews.com/wind/uk-floating-wind-target-not-enough-as-industry-urges-20gw-ambition/2-1-1068116>.

187. *Id.*

188. Umesh Ellichipuram, *UK Announces \$132m Investment in Offshore Wind Ports*, POWER TECH. (Mar. 11, 2021), <https://www.power-technology.com/news/uk-announces-investment-construct-two-offshore-wind-ports/>.

basis of cost and move towards considering other fundamentally important factors as well, such as energy efficiency and the public interest. For instance, the development of offshore wind energy projects can have unintended negative environmental impacts, particularly on marine ecosystems.¹⁸⁹ In addition, the issue of overall life cycle emissions of wind turbines—from raw material extraction in construction to end-of-life disposal—has recently received more traction.¹⁹⁰ A multi-factor auction mechanism to protect social and environmental interests could also give local manufacturers, who are not the most cost-competitive but are more capable of reducing wind turbines' environmental footprints, an advantage in winning contracts. That said, it remains crucial for policymakers to strike a delicate balance among different and sometimes even competing interests in the specific design of renewable energy project auctions.

C. Conclusions

At the core of *UK – C/D (EU)* lies the conundrum faced by many countries attempting to advance industrial efforts during the transition to a low-carbon energy economy: how to balance decarbonization and industrialization objectives as two fundamentally important, yet different and sometimes even mutually incompatible, goals. This remains challenging for policymakers. When economic and social stakes in the renewable energy industry are rapidly growing and economic nationalism is on the rise, a mercantilist green technology competition is likely to be saturated with trade controversies.

UK – C/D (EU) reaffirmed the non-discrimination principle as a cornerstone of WTO law and alerted the global economy that blatantly discriminatory measures will continue to be carefully scrutinized. The lack of success enjoyed by WTO Members defending challenged renewable energy measures under the dispute settlement system seems to echo the enormous difficulty of pursuing dual decarbonization and industrialization

189. As research shows, marine biodiversity and ecosystem structure can be detrimentally affected by the development of offshore wind farms. See, e.g., Helen Bailey, Kate L. Brookes & Paul M. Thompson, *Assessing Environmental Impacts of Offshore Wind Farms: Lessons Learned and Recommendations for the Future*, 10 *AQUATIC BIOSYSTEMS* 1 (2014).

190. *New Global Wind Power Life Cycle Emissions to Reach 55 Mt CO₂ from 2020-2050*, WOOD MACKENZIE (July 8, 2021), <https://www.woodmac.com/press-releases/new-global-wind-power-life-cycle-emissions-to-reach-55-mt-co2-from-2020-2050/#:~:text=Wind%20power%20does%20not%20generate,the%20manufacturing%20of%20wind%20turbines>. Regulation of product life cycle emissions is not purely theoretical, as the EU has proposed several initiatives to manage carbon footprints in low-carbon energy products. See *Commission Proposal for a Regulation of the European Parliament and of the Council Concerning Batteries and Waste Batteries, Repealing Directive 2006/66/EC and Amending Regulation (EU) No 2019/1020*, COM (2020) 798 (Dec. 10, 2020), <https://www.europeansources.info/record/proposal-for-a-regulation-concerning-batteries-and-waste-batteries-repealing-directive-2006-66-ec-and-amending-regulation-eu-no-2019-1020/>.

goals in a WTO-consistent manner. However, this Article argues that not every policy blending decarbonization ambitions and industrial strategies would have such a low chance of passing WTO scrutiny. Carefully calibrated policy space exists for Members to advance industrial objectives within the renewable energy sector without contradicting WTO rules. Illustrative examples include setting ambitious renewable energy targets, investing in the upgrading and expansion of infrastructure, and revising the renewable energy project contract awarding system. Moreover, an often-dismissed benefit of adhering to international trade obligations when designing renewable energy policy measures is that they do curb economically inefficient policy instruments like LCRs, which serve only a narrowly construed agenda at the cost of broader interests. *UK – C/D (EU)* urges both major and emerging renewable energy-producer countries to carefully craft their toolboxes so as to not ignite trade tensions, which is particularly important at a time when protectionism is gaining in popularity.

While the United Kingdom and EU sought an amicable way to solve *UK – C/D (EU)*, the urgency of fixing the WTO dispute settlement system remains a major issue. The absence of a properly functioning Appellate Body is highly problematic, since renewable energy trade tensions still loom large in the aftermath of COVID-19. Restoring operability to the WTO dispute settlement system is integral to preserving the rules-based multilateral trading system, which has significantly contributed to the diffusion of renewable energy technologies over the past decade. Otherwise, without a stable international trade regime, it will be challenging to accelerate the low-carbon energy transition in an efficient and effective manner.

* * *