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SUNNY SKIES AHEAD? POLITICAL ECONOMY OF CLIMATE, TRADE AND SOLAR ENERGY IN INDIA

VYOMA JHA*

The Jawaharlal Nehru National Solar Mission (NSM) is one of India's flagships programs to drive efforts on climate change mitigation and has been the subject of a long-standing trade dispute with the United States (US) at the World Trade Organisation (WTO). The dispute arose over India's use of local content requirements (LCRs) – a policy measure that typically mandates a certain percentage of goods used in the production process to be sourced locally – within the NSM. In the backdrop of India's target to increase solar power capacity to 100 gigawatts (GW) by 2022, this paper presents a socio-legal perspective on whether and how dispute settlement in the WTO impacts India's ambitious solar energy goals. Relying on the literature on fragmentation in international law and international political economy of energy, this paper applies a political economy lens on the solar trade dispute between India and explores: the political economy of LCRs within India's solar policy; the main drivers and underlying politics of the solar trade dispute between India and the US; and the effect of the WTO ruling on regulatory governance of solar energy in India. To do this, the paper relies on a two-pronged qualitative research approach: first, a series of several semi-structured interviews with Indian public officials and relevant stakeholders; and second, an in-depth media discourse analysis of the coverage on the solar trade dispute in leading Indian news outlets with a view to supplement the normative claims emerging from the qualitative interview data.

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This paper finds that the insertion of LCRs within India's solar policy was not politically motivated to support the local solar manufacturing industry. In addition, this paper identifies several underlying political factors leading to a protracted trade dispute between India and the US. In terms of the impact of the WTO ruling on the regulation and governance of solar energy in India, this paper puts forth two thematic narratives: first, on the immediate aftermath of the WTO ruling on the domestic solar manufacturing industry; and second, regarding the government's solar policy pivot, both at the national and international levels. Ultimately, through the lens of the solar trade dispute, this paper illustrates how domestic policies in India are designed in an ad-hoc manner without factoring in all data and analysis of international legal obligations. In the face of an international dispute, domestic processes are not adequately prepared to respond to multiple challenges under the trade and climate change regimes. However, this paper asserts that the WTO decision does not impede India's efforts to achieve its solar targets. In conclusion, this paper attempts to draw some lessons for policymaking in India and underscores the need for building strong legal capacity for public international law in India.

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I. INTRODUCTION

The Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) is facilitating a bottom-up approach to climate action by encouraging countries to submit Nationally Determined Contributions (NDCs) country specific commitments for future climate action.¹ While the Paris Agreement does not contain any concrete provisions relating to renewable energy, it acknowledges “[t]he need to promote universal access to sustainable energy in developing countries ... through the enhanced deployment of *renewable energy* (emphasis added).”² Renewable energy has emerged as one of the key areas for undertaking action to address climate change, with several countries communicating quantified renewable energy targets under their intended NDCs.³

¹ Daniel Bodansky, *Reflections on the Paris Conference*, OPINIO JURIS (Dec. 15, 2015), <http://opiniojuris.org/2015/12/15/reflections-on-the-paris-conference>; Robert N. Stavins; *Paris Agreement — A Good Foundation for Meaningful Progress*, RESOURCES FOR THE FUTURE (Dec. 14, 2015), <http://www.rff.org/blog/2015/paris-agreement-good-foundation-meaningful-progress>; David Victor, *Why Paris Worked: A Different Approach to Climate Diplomacy*, ENVIRONMENT 360 (Dec. 15, 2015), http://e360.yale.edu/feature/why_paris_worked_a_different_approach_to_climate_diplomacy/2940; Lavanya Rajamani, *Paris Triumph*, THE INDIAN EXPRESS, Dec. 16, 2015, <http://indianexpress.com/article/opinion/columns/united-nations-paris-climate-agreement-triumph>.

² *Adoption of the Paris Agreement*, FCCC/CP/2015/L.9/Rev.1 (Dec. 12, 2015), <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>.

³ See Benjamin Stephan et al., *What Place for Renewables in the INDCs?*, World Future Council (Mar. 12, 2016), http://www.worldfuturecouncil.org/inc/uploads/2016/03/WFC_2016_What_Place_for_Renewables_in_the_INDCs.pdf (“142 INDCs mention renewable energy, 108 name the increase of renewable energy as one of their mitigation action, of which 75 include quantified goals.”). See also, *Synthesis report on the aggregate effect of the intended nationally determined contributions*, FCCC/CP/2015/7 (Oct. 30, 2015), <http://unfccc.int/resource/docs/2015/cop21/eng/07.pdf>; see also Kati Kulovesi, *Real or Imagined Controversies? A Climate Law Perspective on the Growing Links between the International Trade and Climate Change Regimes*, 6(1) TRADE L. & DEV. 55-92 (2014).

However, in the absence of a legal framework for the promotion of renewable energy under the UNFCCC, renewable energy policies of countries have been the subject of several legal challenges under international economic law. Dispute settlement, especially through adjudication at the World Trade Organisation (WTO) or before an Investor-State Dispute Settlement (ISDS) tribunal, has brought issues of competitiveness and protectionism to the forefront instead of the climate mitigation potential of renewable energy policies.

Feed-in tariffs (FITs), which have emerged as a popular policy tool to incentivise the uptake of renewable energy and secure global competitive leadership in green technologies,⁴ are at the heart of such international economic disputes. Characterised by three key elements— guaranteed electricity purchase prices, guaranteed grid access and a long-term contract— FITs for renewable energy often incorporate “local content” or “domestic content” requirements which mandates a certain percentage of goods used in the production process of renewable energy projects to be sourced locally.⁵ However, FITs with LCRs share a controversial relationship with the WTO with the legality of such support schemes coming under the WTO scanner. They are being challenged for violating the principle of national treatment,⁶ as well as a provision under the Agreement on Subsidies and Countervailing Measures (SCM Agreement) that expressly prohibits subsidies contingent on the use of LCRs.

Furthermore, renewable energy related disputes tend to blur the traditional North-South divide witnessed in trade disputes as both developed and developing countries are adopting similar renewable energy policies with a potential of upsetting international trade or investment rules and are equally vulnerable to challenge under international economic regimes.⁷ For emerging economies and developing countries, this presents a dichotomous challenge as the threat of international economic disputes against their renewable energy policies could have the effect of a ‘regulatory chill’— which may preclude states from pursuing measures designed to mitigate climate change.

⁴ Richard Stewart et al., *Building Blocks for Global Climate Protection*, 32 STAN. ENVTL. L. J. 341-92 (2013).

⁵ Marie Wilke, *International Centre for Trade and Sustainable Development, Feed-in Tariffs for Renewable Energy and WTO Subsidy Rules: An Initial Legal Review* (November 2011), <https://www.ictsd.org/downloads/2011/11/feed-in-tariffs-for-renewable-energy-and-wto-subsidy-rules.pdf>.

⁶ *Infra* note 37.

⁷ Mark Wu & Joseph Salzman, *The Next Generation of Trade and Environment Conflicts: The Rise of Green Industrial Policy*, 108 NORTHWESTERN L. REV. 401-74 (2014).

Renewable energy policies are at the centre of a contentious triangle that can be drawn between the international economic regime, the global climate regime and a country's regulatory autonomy. Disjointed fragments of rules governing the renewable energy sector coupled with the absence of an observable method to resolve normative and institutional conflicts between the global climate and trade regimes could in turn imperil the efforts of countries to transition towards a low-carbon economy. How do countries deal with the complexities between the global regimes for trade and climate change? How are the fundamental tensions between these different legal regimes resolved? Will the objectives of one legal regime take precedence over the other? Is there any value in reinterpreting the existing international trade rules to make countries' climate commitments work? This paper attempts to explore these complicated issues through the lens of the trade dispute initiated by the United States (US) against India's solar policy.

Before setting up the theoretical framework that will frame this paper's findings and discussion, it is useful to place the data in context; accordingly, the following sections explain the motivation and set up the context for this case study.

A. *Why India?*

India occupies an 'intriguing dual position in global climate politics': on one hand, it is still a developing economy with a substantial poverty problem and low levels of historical and per capita emissions; while on the other, it is a large emerging economy that is under increasing pressure to address the global climate challenge.⁸ The rising profile of the renewable energy sector in the Indian energy framework must be understood in light of the twin urgencies facing the country: first, the need to meet its energy requirements and ensure universal energy access to its poor; and second, the requirement to reduce greenhouse gas emissions and adopt a low-carbon pathway.⁹

Meanwhile, under the international economic order, India is charting a new narrative as it is increasingly turning into an outward investor and is not merely an investment destination or a host State.¹⁰ In this evolving global order, India finds itself competing with the developed countries in certain areas of economic activity with climate mitigation potential: especially in the renewable energy sector.

⁸ Navroz K. Dubash, *The Politics of Climate Change in India: Narratives of Equity and Co-benefits*, 4(3) WIREs CLIMATE CHANGE 191-201 (2013).

⁹ Vyoma Jha, *India's Twin Concerns over Energy Security and Climate Change: Revisiting India's Investment Treaties through a Sustainable Development Lens*, 5(1) TRADE L. & DEV. 109-149 (2013) [hereinafter *Energy Security*]; Arunabha Ghosh, *Governing Clean Energy Subsidies: Why Legal and Policy Clarity is Needed*, 5(3) BIORES (2011).

¹⁰ *Energy Security*, *supra* note 9.

Crucially, the NSM— has been the subject of a WTO dispute initiated by the US owing to certain provisions on LCRs (*Indian Solar* dispute).¹¹ Both the Panel and the Appellate Body ruled against India and held that it violated global trade rules by imposing mandatory LCRs on solar power producers.

The NSM was launched by the Government of India in 2010 to create an enabling policy framework for the deployment of 22 gigawatts (GW) of solar power by 2022.¹² In 2015, India set an ambitious domestic goal of achieving 175 GW of installed renewable energy capacity by 2022. Of this, India's solar power capacity target is 100 GW by 2022, revised by five times its earlier goal of 22 GW of solar power by 2022.¹³ According to India's NDC submitted to the UNFCCC, 40% of its total power capacity is expected to come from renewable sources by 2030.¹⁴ To put these numbers in perspective, the entire size of India's current installed capacity is 278 GW.¹⁵ In addition, the government is targeting nearly US\$100 billion in renewable energy investments, including foreign direct investment, over the next five years under the recently launched "Make in India" program. Therefore, the growth in the renewable energy sector in India over the next decade is set to be exponential.

The challenge for a large emerging country like India, which embarks on increasing renewable energy-related regulatory action driven by concerns over addressing

¹¹ Panel Report, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc. WT/DS456/R (Feb. 24, 2016), http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds456_e.htm; Appellate Body Report, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc. WT/DS456/AB/R (Sept. 16, 2016), http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds456_e.htm [hereinafter *Indian Solar* dispute].

¹² Government of India, Ministry of New and Renewable Energy, Resolution No. 5/14/2008, Jawaharlal Nehru National Solar Mission (Jan. 11 2010), <http://www.mnre.gov.in/solar-mission/jnnsnsm/resolution-2>.

¹³ This revised target of 100 GW will principally comprise of 40 GW Rooftop and 60 GW through Large and Medium Scale Grid Connected Solar Power Projects. *See* PIB Press Release, Revision of Cumulative Targets under National Solar Mission from 20,000 MW by 2021-22 to 1,00,000 MW (June 17, 2015), <http://pib.nic.in/newsite/PrintRelease.aspx?relid=122566>.

¹⁴ India's INDC submitted to the UNFCCC (Oct. 1, 2015), <http://www4.unfccc.int/Submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf>.

¹⁵ All India Installed Capacity (in MW) of Power Stations- September, Central Electricity Authority (Sept. 30, 2015), http://www.cea.nic.in/reports/monthly/executivesummary/2015/exe_summary-09.pdf.

climate change, is that the issues surrounding dispute resolution under international economic law are set to become more complex.

B. Why this Dispute?

The *Indian Solar* dispute has a particularly chequered history. In February 2013, the United States requested consultations with India over certain measures relating to LCRs under the NSM. A year later, in February 2014, the US requested supplementary consultations with India, which then led to the creation of the Panel in April 2014.¹⁶ Interestingly, between the two rounds of consultations, India filed a request for information with the WTO Committees on Subsidies and Countervailing Measures and Trade-Related Investment Measures requesting the US to justify certain LCRs within its renewable energy support programs.¹⁷ India's request, at the time, appeared tailor-made for a counter-challenge against the US. If similar support measures were being incorporated in renewable energy programs in the US, why did they specifically raise a dispute with India? Could India have leveraged the counter-challenge to negotiate a settlement in the WTO dispute brought by the US? Coming in the wake of American pressure on India to take on a more proactive role in climate change action, how was this dispute perceived within the policymaking circles in India?

It was not until September 2016 that India requested formal consultations with the US regarding certain LCRs and subsidies provided by the governments of eight American states in the renewable energy sector.¹⁸ India's request for consultations came exactly a week before the Appellate Body issued its final report in the *Indian Solar* dispute, which begs the question: why did India's counter-challenge come almost three years after it had first raised these concerns?

The solar trade war between India and the US is a fascinating case study as it has been a long-running dispute between the two countries and reveals several interesting facets. The facet of this story that elicits an immediate response from

¹⁶ According to Article 4.7, Dispute Settlement Understanding, if the mandatory consultations fail to produce a satisfactory settlement within 60 days, then the complainant may request adjudication by a Panel. Understanding on Rules and Procedures Governing the Settlement of Disputes art. 4.7, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organisation, Annex 2, 1869 U.N.T.S. 401.

¹⁷ Committee on Subsidies and Countervailing Measures, *Minutes of the Regular Meeting Held on 22 April 2013*, WTO Doc. G/SCM/M/85 (Aug. 5, 2013) [hereinafter *Minutes of the Regular Meeting*].

¹⁸ Request for Consultations by India, *United States—Certain Measures Relating to the Renewable Energy Sector*, WTO Doc. WT/DS510 (Sept. 9, 2016). The challenged measures are from the states of Washington, California, Montana, Massachusetts, Connecticut, Michigan, Delaware and Minnesota.

scholars and practitioners of international trade law is that this dispute would not have arisen if there were no LCRs in India's solar policy. The simplest way to avoid or resolve the dispute was to drop the WTO-inconsistent LCR provisions in the NSM; what explains India's initial motivation to incorporate the LCR approach in its flagship solar policy?

The second facet of this story concerns India's insistence to continue with a WTO-inconsistent measure, despite the initiation of a formal WTO challenge by the US and contrary advice within the inner circles of the government. Why did the early consultations with the US yield no results, especially if the challenged NSM provisions were *prima facie* incompatible with the WTO rules? What is the political economy behind India contesting the trade dispute brought by the US?

The third interesting facet of this story is India raising the defence that the LCR measures should be viewed in the context of India's broader objectives "to promote ecologically sustainable growth while addressing India's energy security challenge." By raising the energy security argument, did India raise doubts over the mutual supportiveness between the global trade and climate regimes? Is the *Indian Solar* dispute a test case illustrating the fragmentation of the international legal regimes for trade and climate change?

The fourth facet of the story is the impact of the WTO decision on the regulatory governance of solar energy in India. How does dispute resolution at the WTO interfere with India's energy needs and climate commitments? Does the WTO ruling in the *Indian Solar* dispute constrain India's domestic plans of achieving 100 GW of solar capacity by 2022? This case study demonstrates the pressures exerted by international dispute settlement on the domestic policymaking process, bringing out the clash between domestic politics, diplomatic considerations and commercial interests.

The fifth facet is India's key role in the launch and operationalisation of the International Solar Alliance (ISA) to boost solar energy in developing countries. Although not directly connected with the WTO dispute, this development appears to mark a shift in India's role from a norm taker to a norm maker in the global solar energy landscape.

This paper uses the overarching approach of a case study and relies on different methodologies to link each of these stories and analyse their interrelationships. A traditional case law analysis would involve a critical study of the Panel and Appellate Body reports in the trade dispute; however, this paper takes a different approach as it does not focus on case law analysis nor it is concerned with the contribution of this case to the development of WTO jurisprudence. Rather, by linking the literature on fragmentation in international law and international

political economy, this paper applies a political economy lens on the *Indian Solar* dispute in order to present a socio-legal perspective on the main research question of how the solar trade dispute between India and the US affects solar energy regulatory governance in India.¹⁹ In doing so, it contrasts “law in books” (several countries with WTO-inconsistent LCRs in their clean energy policies could face a WTO dispute) and “law in action” (only some of these countries’ policies get challenged at the WTO) by delving into the particulars of the *Indian Solar* dispute.

Using the illustrative example of India, this paper focuses on a two-pronged²⁰ empirical analysis to contextualise the thesis: stakeholder analysis²¹ and media

¹⁹ For the purposes of this paper, the contours of the solar trade dispute between India and the US include: (1) case law i.e. the Panel and Appellate Body reports in the *Indian Solar* dispute; (2) dispute-related consultations, both formal and informal, between the two countries; and (3) India’s negotiating and legal teams during the WTO dispute settlement process.

²⁰ The two-pronged methodological approach that I have selected for this paper has some distinctive advantages. First, it has allowed me to obtain a deep and contextualised description of the political economy behind the solar trade dispute, as well as the policy in dispute at the WTO. The media discourse analysis provides an additional layer of granularity in understanding the political economy of the dispute and supplements the normative claims emerging from the qualitative interview data. Second, it has made data collection possible through different empirical methods and the media discourse analysis provides evaluative data on the position of certain relevant actors who are either no longer in the same position or could not be reached for interviews. For instance, I could not gain access to interview either the Minister of New and Renewable Energy, Mr. Piyush Goyal, or the Minister of Commerce and Industry, Ms. Nirmala Sitharaman; however, their statements and perceptions on the Indian solar dispute in these media reports bolster the narrative emerging from the interview data. Third, it has given me the opportunity to explore the issues from a broader socio-legal perspective, an aspect that is generally overlooked by international legal scholars.

²¹ I was interested in understanding how, in their own words, different stakeholders conceptualised the Indian Solar dispute and their impressions on how the WTO ruling affects regulatory governance of solar energy in India. Therefore, I followed an interview-based qualitative research strategy. When selecting the individuals to be interviewed during the research process, I wanted to ensure that I capture an entire range of stakeholders so as to offer a cross-sectional analysis. Interviewees were selected through non-random purposive sampling technique. The interviews were semi-structured and based on a protocol prepared in advance. The interview questions were designed to elicit the professional and expert opinions of relevant stakeholders across the following groups in India: (1) government officials, (2) legal actors, including trade lawyers and academics, (3) policy think tanks, (4) civil society and (5) industry. The interviews were conducted after the approval of IRB Protocol by Stanford University’s Research Compliance Office. I conducted a total of twenty-two oral interviews between December 2016 and February 2017. Sixteen interviews were conducted face-to-face in New Delhi, India in December 2016. The remaining six interviews had to be conducted by phone as the interviewees were

discourse analysis²². It blends issues of energy policy preferences of developing countries, political economy of transitioning to clean energy, dispute settlement, bilateral diplomacy and political sensitivities. Whether or not there are clear and replicable answers from the case study, the act of raising these questions will be a useful exercise in understanding a country's perspective on the fragmentation of international law—in this case study, India. What can we learn about the domestic politics and the ways in which the two regimes were harmonised at the national level? What implications are there for policymaking in India?

The organisation of this paper is as follows. Part II sets up two theoretical frameworks that flesh out the country-specific factors critical to this paper's analysis: the fragmentation of international law and the international political economy of energy. Part III constitutes the core of this case study and discusses the thematic findings from analysing the interview data and media discourse; it reveals how India navigates the complex and fragmented challenge of adopting clean energy policies in an evolving global economic order as well as the role of international law in the domestic policymaking process. Finally, Part IV offers concluding thoughts on the thematic discussion in Part III. The conclusion attempts to draw some lessons for policymaking in India, as well as highlights the need for building stronger legal capacity for public international law in India.

II. THEORETICAL BACKGROUND

A. Fragmentation of International Law: Trade and Climate Change

This case study is best understood in the backdrop of the phenomenon of fragmentation in international law, which is the emergence of specialised rules, legal institutions and spheres of legal practice in international law that have no clear

in a different city or country. All interviewees were promised anonymity. To quote them, I identify them by a general description of their role. More information is on file with the author.

²² I decided to supplement the research interviews with qualitative content analysis of the media coverage around the dispute in leading Indian media outlets between January 2012 and January 2017. A primary reason is to discuss content analysis as an important part of the methodological toolbox for illustrating patterns and trends about how the solar trade dispute is represented and understood in the local context. I chose to look at media coverage across nine national circulation and business dailies, and three online media sources. I ran an online archival search and the media sources were scanned for articles using the keywords 'India', 'solar', and 'WTO', coupled with any of the following: 'trade', 'energy', 'climate change', or 'anti-dumping duty'. Following two rounds of coding, I qualitatively analysed 173 articles for various stakeholder quotes and statements in the backdrop of the broad narratives emerging from the interview data. A comprehensive coding scheme is on file with the author.

relationship to each another.²³ In international relations literature, some have described this rising phenomenon in global governance as “institutional complexity”, arising when two or more distinctive institutions interact, in a non-hierarchical manner, in their governance of the same activity or aspects of the same activity.²⁴ In 2009, in a first-of-its-kind collaborative effort between the leading institutions under the global trade and climate change regimes respectively, the WTO Secretariat and United Nations Environment Programme (UNEP) jointly produced a report to review how trade and climate change policies interact and how they can be mutually supportive.²⁵ In turn, this has sparked a debate on the interaction between the different fields of international law, among which the relationship between the specialised legal regimes for trade and climate change has caught the attention of several law and political science scholars.²⁶

In the context of the renewable energy sector, climate change is increasingly becoming an international economic concern with “green economy” and “green growth” gaining traction since the United Nations Conference on Sustainable Development (Rio+20) and renders the relationship between the UNFCCC and WTO regimes extremely important from a legal perspective.²⁷ As countries embark on designing a new policy infrastructure for achieving a low-carbon economy, especially though the promotion of renewable energy, understanding the ways in which existing rules and institutions in different international regimes collide and interact will be crucial to domestic policymaking. Some scholars have reflected on how an understanding of regime interaction in international law requires an

²³ Int’l Law Comm’n, Rep. of the Study Group of the International Law Commission, UN Doc A/CN.4/L.682 (2006).

²⁴ MANAGING INSTITUTIONAL COMPLEXITY: REGIME INTERPLAY AND GLOBAL ENVIRONMENTAL CHANGE (Sebastian Oberthür Olav & Schram Stokke eds., 2011).

²⁵ UNITED NATIONS ENVIRONMENT PROGRAMME AND THE WORLD TRADE ORGANISATION, REPORT ON TRADE AND CLIMATE CHANGE (2009), https://www.wto.org/english/res_e/booksp_e/trade_climate_change_e.pdf [hereinafter CLIMATE CHANGE].

²⁶ See generally Robert O. Keohane & David G. Victor, *The Regime Complex for Climate Change*, 9(1) PERSP. ON POL. 7-23 (2011); Kenneth W. Abbott, *The Transnational Regime Complex for Climate Change*, 30(4) ENVIR. & PLAN. C: POL. & SPACE 571-90 (2012); Margaret A. Young, *Climate Change Law and Regime Interaction*, 2 CARBON & CLIMATE L.R. 147-57 (2010) [hereinafter *Regime Interaction*]; Harro Van Asselt, *Legal and Political Approaches in Interplay Management: Dealing with the Fragmentation of Global Climate Governance*, in MANAGING INSTITUTIONAL COMPLEXITY: REGIME INTERPLAY AND GLOBAL ENVIRONMENTAL CHANGE (Sebastian Oberthür Olav & Schram Stokke eds., 2011).

²⁷ Kati Kulovesi, *International Trade Disputes on Renewable Energy: Testing Ground for the Mutual Supportiveness of WTO Law and Climate Change Law*, 23(3) REV. EUR. CMTY. & INT’L ENVIR. L. 342-553 (2014) [hereinafter *International Trade Disputes*].

investigation into different stages of international law-making and adjudication,²⁸ as well as the internal politics of regimes;²⁹ for instance, regime interaction between distinct institutions governing climate and trade at the adjudication stage, especially dispute settlement at the WTO, could be mutually reinforcing.³⁰

One of the ways in which climate, trade and the respective domestic and international rules and institutions governing them interact with each other is on the issue of law as domestic climate measures could potentially be in violation of the WTO rules and may be subject to scrutiny to determine their consistency with WTO rules.³¹ The WTO–UNEP report detailed several policy measures, including regulatory measures or economic incentives, which are being used by countries to mitigate climate change that could potentially come under the WTO scrutiny— key among which was price support financing policies, such as FITs, that could come under the lens of the WTO law on subsidies.³² As some scholars describe, government support or subsidies for clean technologies has emerged as the “primary climate change battleground at the WTO”³³ and is quickly “emerging as the most concrete testing ground for assessing the mutual supportiveness of WTO rules and climate change law”.³⁴

1. Subsidy, Climate Change and the WTO

The most common WTO disputes in the renewable energy sector are over government support measures that incorporate the use of local equipment for renewable energy generation.³⁵ Although the policy choice for LCRs garners

²⁸ Margaret A. Young, *Introduction: The Productive Friction between Regimes*, in REGIME INTERACTION IN INTERNATIONAL LAW: FACING FRAGMENTATION 1-2 (Margaret A. Young ed., 2012).

²⁹ HARRO VAN ASSELT, *THE FRAGMENTATION OF GLOBAL CLIMATE GOVERNANCE: CONSEQUENCES AND MANAGEMENT OF REGIME INTERACTIONS* (2014).

³⁰ *Regime Interaction*, *supra* note 26.

³¹ Matthew Stilwell, *Improving Institutional Coherence: Managing Interplay between Trade and Climate Change* 7-8 (Global Economic Governance Programme, GEG Working Paper No. 49, 2009).

³² CLIMATE CHANGE, *supra* note 25.

³³ D.M. Firger & M.B. Gerrad, *Climate Change and the WTO: Expected Battlegrounds, Surprising Battles*, 133 INT’L ENV’T. REP. 1 (2011).

³⁴ *International Trade Disputes*, *supra* note 27.

³⁵ Rafael Leal-Arcas & Andrew Filis, *Renewable Energy Disputes in the World Trade Organisation*, 12(3) TRANSNAT’L DISP. MGMT. 1-51 (2015); Timothy Meyer, *Energy Subsidies and the World Trade Organisation*, 17(22) ASIL INSIGHTS (2013). The following cases have been initiated at the WTO, although not all have resulted in a final decision: Appellate Body Report, *Canada—Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS412/AB/R, WT/DS426/AB/R (May 6, 2013); Appellate Body Report, *India—*

political support on the promise of “green” job creation and long-term economic competitiveness,³⁶ the legality of these support schemes has come under the WTO scanner for violating the ‘national treatment’ rule: a basic principle of WTO that prohibits discrimination between imported and domestic goods.³⁷ While several countries around the world have incorporated LCRs within FITs for renewable energy,³⁸ not all such policies have been challenged at the WTO; among the ones that have been challenged at the WTO, not all have led to the formal process of dispute resolution (Table 1). In fact, several scholars have criticised the WTO law on subsidies for its inability to distinguish between “desirable” and “undesirable” subsidies i.e. in the context of climate change, the traditional approach of the WTO law does not allow subsidies for renewable (desirable) and non-renewable

Certain Measures Relating to Solar Cells and Solar Modules, WTO Doc. WT/DS456/AB/R (Sept. 16, 2016); Request for Consultations by the United States, *China—Measures concerning wind power equipment*, WTO Doc. WT/DS419/1 (Jan. 6, 2011); Appellate Body Report, *United States—Countervailing Duty Measures on Certain Products from China*, WTO Doc. WT/DS437/AB/R (Dec. 18, 2014); Request for Consultations by Argentina, *European Union and a Member State—Certain Measures Concerning the Importation of Biodiesels*, WTO Doc. WT/DS443/1 (Aug. 23, 2012); Appellate Body Report, *United States—Countervailing and Anti-dumping Measures on Certain Products from China*, WTO Doc. WT/DS449/AB/R (July 7, 2014); Request for consultations by China, *European Union and certain Member States—Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS452/1 (Nov. 7, 2012); 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).

³⁶ JAN-CHRISTOPH KUNTZE & TOM MOERENHOUT, INT’L CENTRE FOR TRADE AND SUSTAINABLE DEV., LOCAL CONTENT REQUIREMENTS AND THE RENEWABLE ENERGY INDUSTRY - A GOOD MATCH? (2013) [hereinafter KUNTZE & MOERENHOUT, LOCAL CONTENT REQUIREMENTS]; SHERRY STEPHENSON, INT’L CENTRE FOR TRADE AND SUSTAINABLE DEV., ADDRESSING LOCAL CONTENT REQUIREMENTS IN A SUSTAINABLE ENERGY TRADE AGREEMENT (2013) [hereinafter STEPHENSON, LOCAL CONTENT REQUIREMENTS]; Joanna I. Lewis, *The Rise of Renewable Energy Protectionism: Emerging Trade Conflicts and Implications for Low Carbon Development*, 14(4) GLOBAL ENVTL. POL. 10-35, 11 (2014) [hereinafter *Renewable Energy*].

³⁷ Article III:4 of the General Agreement on Trade and Tariff (GATT) reads: “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.” Article 2.1 of the Agreement on Trade-Related Investment Measures (TRIMs) reads: “1. Without prejudice to other rights and obligations under GATT 1994, no Member shall apply any TRIM that is inconsistent with the provisions of Article III or Article XI of GATT 1994.”

³⁸ See *infra* Table 2.

(undesirable) forms of energy to be treated differently based on the consequences it has on the environment.³⁹

Table 1: WTO challenges concerning renewable energy support programs

Case	Date Launched	Dispute Type	Complainant	Respondent	Industry or Program Targeted	Status
<i>Canada – Certain Measures Affecting the Renewable Energy Generation Sector</i> (DS412)	2010	LCRs, Subsidies	Japan, EU	Canada	Ontario's FIT program	WTO Panel and Appellate Body reports
<i>China – Measures Concerning Wind Power Equipment</i> (DS419)	2010	LCRs, Subsidies	United States	China	China's wind subsidy	Resolved in bilateral negotiations
<i>European Union and Certain Member States – Certain Measures Affecting the Renewable Energy Generation Sector</i> (DS452)	2012	LCRs, Subsidies	China	EU, Greece, Italy	FIT programs of certain EU member states	Pending
<i>India – Certain Measures Relating to Solar Cells and Solar Modules</i>	2013	LCRs, Subsidies	United States	India	India's National Solar Mission	WTO Panel and Appellate Body reports

³⁹ Alan O. Sykes, *The Questionable Case for Subsidies Regulation: A Comparative Perspective*, 2(2) J. LEGAL ANALYSIS 473-523 (2010); see also argument calling for a distinction between favourable subsidies to address climate change versus pervasive subsidies that support fossil fuels in ROBERT HOWSE, INT'L INST. FOR SUSTAINABLE DEV., CLIMATE MITIGATION SUBSIDIES AND THE WTO LEGAL FRAMEWORK: A POLICY ANALYSIS (2010); Luca Rubini, *Ain't Wastin' Time No More: Subsidies for Renewable Energy, the SCM Agreement, Policy Space, and Law Reform*, 15(2) J. INT'L ECON. L. 525 (2012); Timothy Meyer, *Energy Subsidies and the World Trade Organisation*, 17(22) ASIL INSIGHTS (2013); 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*, (EUI, Working Paper No. 17, 2014); Andrew Green, *Trade Rules and Climate Change Subsidies*, 5(3) WORLD TRADE REV. 377-414 (2006).

(DS456)						
United States — Certain Measures Relating to the Renewable Energy Sector (DS510)	2016	LCRs, Subsidies	India	United States	US state- level support programs for renewable energy	Panel formation requested

Source: Author's compilation based on Lewis (2014), Wu (2015), Meyer (2015)

*Canada—Certain Measures Affecting the Renewable Energy Generation Sector*⁴⁰ was the first ever WTO dispute to address the ‘trade versus climate’ debate in the context of renewable energy policies.⁴¹ In that case, Japan and the European Union contended that Ontario’s FIT Program was in violation of the national treatment rule contained in Article III:4 of the General Agreement on Tariffs and Trade (GATT) and Article 2.1 of the Agreement on Trade-Related Investment Measures (TRIMs) as well as Article 3.1(b) of the SCM Agreement, according to which subsidies contingent on the use of domestic content requirements are prohibited. Both the Panel and the Appellate Body found the measures to be inconsistent with Article III:4 of the GATT and Article 2.1 of the TRIMs Agreement, but they left the question of whether Ontario’s FIT Program qualifies as a “subsidy” largely unanswered.⁴²

Following the decision in the *Canadian FIT dispute*, several authors have critically analysed the implications of the case for future renewable energy policies and have called for reforming existing WTO subsidy rules by⁴³: (1) an interpretive understanding, authentic interpretation, a temporary waiver, or treaty amendment;⁴⁴ (2) an interpretive understanding rather than an amendment;⁴⁵ (3)

⁴⁰ Panel Body Report, *Canada—Certain Measures Affecting the Renewable Energy Sector*, WTO Docs. WT/DS412/R, WT/DS426/R (Dec. 19, 2012); Appellate Body Report, *Canada—Certain Measures Affecting the Renewable Energy Sector*, WTO Docs. WT/DS412/AB/R, WT/DS426/AB/R (May 6, 2013) [hereinafter Canadian FIT].

⁴¹ Avidan Kent & Vyoma Jha, *Keeping up With the Changing Climate: The WTO's Evolutive Approach to Answer the Trade and Climate Conundrum*, 15(1-2) J. WORLD INV. & TRADE 245-71 (2014).

⁴² *International Trade Disputes*, *supra* note 27, at 90.

⁴³ Luca Rubini, *ASCM Disciplines and Recent WTO Case Law Developments: What Space for ‘Green’ Subsidies?*, (EUI, Working Paper RSCAS No. 3, 2015); Luca Rubini, *Rethinking International Subsidies Disciplines: Rationale and Possible Avenues for Reform*, E15 INITIATIVE (Nov. 2015), http://e15initiative.org/wp-content/uploads/2015/09/E15_Subsidies_Rubini_final.pdf.

⁴⁴ AARON COSBEY & LUCA RUBINI, INT’L CENTRE FOR TRADE AND SUSTAINABLE DEV. & WORLD ECON. FORUM, DOES IT FIT? AN ASSESSMENT OF THE EFFECTIVENESS OF

considering the costs and benefits of adjusting WTO rules to provide policy space for measure to mitigate climate change and promote renewable energy;⁴⁶ (4) a new discussion on including reasonable environmental exceptions in the SCM Agreement;⁴⁷ (5) improving the ability of subsidies disciplines to internalise climate change costs of energy production and consumption, for instance, through a new multilateral agreement on subsidies or trade remedies,⁴⁸ or a trade-related initiative for sustainable energy;⁴⁹ and (6) re-introducing environmental “green light” subsidies.⁵⁰ Some authors have also examined the conditions under which the states can improve the subsidies discipline through the use of informal means.⁵¹ One of the only Indian scholars to have written on the issue, James Nedumpara argues how the lack of specific exceptions or exemptions under the SCM Agreement and TRIMs could turn the implementation of renewable energy programs difficult for developing countries.⁵²

RENEWABLE ENERGY MEASURES AND OF THE IMPLICATIONS OF THE CANADA—RENEWABLE ENERGY/FIT DISPUTES (2014), <http://e15initiative.org/wp-content/uploads/2015/09/E15-Clean-Energy-Technologies-CosbeyRubini-FINAL.pdf> [hereinafter DOES IT FIT?].

⁴⁵ ROBERT HOWSE, INT’L CENTRE FOR TRADE AND SUSTAINABLE DEV. & WORLD ECON. FORUM, SECURING POLICY SPACE FOR CLEAN ENERGY UNDER THE SCM AGREEMENT: ALTERNATIVE APPROACHES, (2014), <http://e15initiative.org/wp-content/uploads/2015/09/E15-CETs-Howse-Final.pdf>.

⁴⁶ AMELIA PORGES & THOMAS L. BREWER, INT’L CENTRE FOR TRADE AND SUSTAINABLE DEV. & WORLD ECON. FORUM, CLIMATE CHANGE AND A RENEWABLE ENERGY SCALE-UP: RESPONDING TO CHALLENGES POSED TO THE WTO (2014), <http://e15initiative.org/wp-content/uploads/2015/09/E15-CETs-Porges-and-Brewer-Final.pdf>.

⁴⁷ Steve Charnovitz & Carolyn Fischer, *Canada – Renewable Energy: Implications for WTO Law on Green and Not-so-Green Subsidies* 24 (EUI, Working Paper RSCAS No. 109).

⁴⁸ ILARIA ESPA & SONIA ROLLAND, INT’L CENTRE FOR TRADE AND SUSTAINABLE DEV. & WORLD ECON. FORUM, SUBSIDIES, CLEAN ENERGY, AND CLIMATE CHANGE (2015), <https://e15initiative.org/wp-content/uploads/2015/09/E15-Subsidies-EspaRolland-FINAL.pdf>

⁴⁹ ARUNABHA GHOSH & HIMANI GANGANIA, GOVERNING CLEAN ENERGY SUBSIDIES: WHAT, WHY, AND HOW LEGAL? (ICTSD Global Platform on Climate Change, Trade and Sustainable Energy, August 2012).

⁵⁰ Mark Wu, *Re-examining ‘Green Light’ Subsidies in the Wake of New Green Industrial Policies*, (August 2015), <http://e15initiative.org/publications/re-examining-green-light-subsidies-in-the-wake-of-new-green-industrial-policies-2/>; Sadiq Bigdeli, *Resurrecting the Dead? The Expired Non-Actionable Subsidies and the Lingering Question of ‘Green Space’*, 8(2) MANCHESTER J. INT’L ECON. L. 2–37 (2011).

⁵¹ Gregory Shaffer et al., *Can Informal Law Discipline Subsidies?*, 18 J. INT’L ECON. L. 711–41 (2015).

⁵² James J. Nedumpara, *Renewable Energy and the WTO: The Limits of Government Intervention*, 9 INDIAN J. L. & TECH. 72 (2013).

Consistent with the reasoning in the *Canadian FIT dispute*, the Panel and Appellate body in the *Indian Solar* dispute held that imposing LCRs within the NSM was inconsistent with the national treatment rule contained in Article III:4 of the GATT and Article 2.1 of the TRIMs Agreement.⁵³ While both these WTO cases appear to have spelt the death knell for LCRs within the FITs for renewable energy, the question of whether FITs for renewable energy are a permissible “subsidy” under the SCM Agreement continues to remain unsettled. However, the scope of this paper does not extend to determining whether the WTO law on subsidies should be revisited in the aftermath of the *Indian Solar* dispute because the US dropped the “subsidy” challenge under the SCM Agreement in its complaint.⁵⁴

The first plank of this paper’s theoretical framework is, therefore, the interaction between the trade and the climate change regimes at the adjudication stage. It specifically focuses on the *Indian Solar* dispute as the case straddles core principles of both the trade and climate change regimes: from the trade perspective, it involves the use of a protectionist measure to support the local solar manufacturing industry; and from the climate change perspective, it involves India’s flagship program to accelerate its efforts in climate change mitigation.

B. *International Political Economy of Energy: Local Content Requirements, Clean Energy and Trade Conflicts*

This section brings us to the question of why LCRs become a part of countries’ renewable energy policies in spite of their inherent trade-restrictive nature. What is the motivation behind governments pursuing such support measures? Is there a particular justification for protectionism in the renewable energy sector? More importantly, why do only a few of these infractions lead to dispute settlement at the WTO?

1. Political Economy of LCRs

The aim of the international community should be to foster greater international cooperation to keep investment flowing in the direction of clean energy policies that countries develop for climate change adaptation and mitigation.⁵⁵ Therefore, policies that foster innovation in the renewable energy sector could be considered a good industrial policy not just for the home country but also a global public good as such measures are designed to pursue both environmental and industrial policy

⁵³ *Indian Solar* dispute, *supra* note 11.

⁵⁴ *Id.*

⁵⁵ Rafael Leal-Arcas, *Unilateral Trade-related Climate Change Measures*, 13 J. WORLD INV. & TRADE 875-927 (2012), at 900.

objectives.⁵⁶ Countries design renewable energy support policies with a view to promote the following: climate change mitigation, energy security, creation of ‘green jobs’ and domestic technological progress. The latter set of objectives is achieved by making the support contingent on the use of domestically produced renewable energy technologies.⁵⁷ Therefore, LCRs are typically considered an instrument of industrial policy and could ultimately be considered an environmental measure as it serves as the “grease” that makes the environmental measure (to which it is attached) possible.⁵⁸

Table 2: Examples of LCRs in the renewable energy sector

Country	Industry	Year	LCR% (if known)
China	Wind	1997/2009	20/70
Brazil	Wind	2012	60
India	Solar	2011	30
Canada (Ontario)	Wind	2009/2012	25/50
Canada (Quebec)	Wind	2003/2012	40/60
Ukraine	Wind/Solar	2013	
USA	Wind/Solar/Others	2009	~25-50
Spain	Wind	2012	70
Italy	Solar	2011	Variable
France	Solar	2012	60
Croatia	Wind/Solar/Others	2012	
South Africa	Wind/Solar	2011	35
Turkey	Wind/Solar/Others	2011	Variable
Argentina	Wind	2005	
Malaysia	Wind/Solar/Others	2010	

Source: Author's compilation based on Moerenhout (2013), Lewis (2014), Meyer (2015)

Hufbauer et al. produced one of the most comprehensive works on LCRs that illuminates the use, characteristics, motivations behind and effect of such

⁵⁶ DOES IT FIT?, *supra* note 44.

⁵⁷ *International Trade Disputes*, *supra* note 27, at 343.

⁵⁸ DOES IT FIT?, *supra* note 44, at 1; Luca Rubini, *What Does the Recent WTO Litigation on Renewable Energy Subsidies Tell Us About Methodology in Legal Analysis? The Good, the Bad, and the Ugly* (EUI, Working Paper RSCAS No. 05, 2014).

measures.⁵⁹ Kuntze and Moerenhout have explained the reasons behind LCRs finding their way into green industrial policies: first, the political economy that LCRs augment public support for renewable energy support measures; second, the need for protection of the domestic “infant” industry, especially in developing countries; third, the creation of “green jobs”; and fourth, the potential environmental benefits from greater competition among renewable energy developers and producers.⁶⁰ They proceed to develop a five-part framework to assess whether LCRs in renewable energy production have a beneficial impact for the domestic economy in terms of: market size and stability, policy design, policy coherence, industrial sophistication and innovation potential.⁶¹ Given the incompatibility of LCRs with WTO rules, some other writers have analysed alternatives to such measures and highlighted lessons for future trade agreements.⁶²

Among legal scholars, Kent argues for a limited amount of LCRs, either a specific percentage or a time-bound phase-out, as they “sweeten the pill” of adopting support schemes in the first place;⁶³ while Bigdeli suggests that the “current discourses of “trade protectionism” are ill-equipped to address the contemporary problems of green industrial policy so far as we accept that *some form* of localisation is regarded an essential part of any successful RE(renewable energy) wide deployment policy”.⁶⁴ Meyer reports the results of an original fifty-state survey: out of which forty-four state renewable energy programs in twenty-three states within the United States contain LCRs that could potentially violate WTO rules; he argues that, notwithstanding their discriminatory nature, such measures increase global welfare in the aggregate.⁶⁵ The next portion examines the following questions: Was there a political argument for the creation of “green jobs” in India? Were LCRs politically necessary for the success of the NSM and India’s solar targets?

⁵⁹ GARY CLYDE HUFBAUER ET AL., PETERSON INST. FOR INT’L ECON., LOCAL CONTENT REQUIREMENTS: A GLOBAL PROBLEM (2013) [hereinafter GARY ET AL., LOCAL CONTENT REQUIREMENTS].

⁶⁰ KUNTZE & MOERENHOUT, LOCAL CONTENT REQUIREMENTS, *supra* note 36.

⁶¹ *Id.*

⁶² STEPHENSON, LOCAL CONTENT REQUIREMENTS, *supra* note 36.

⁶³ Avidan Kent, *The WTO Law on Subsidies and Climate Change: Overcoming the Dissonance?*, 5(2) TRADE L. & DEV. 344-82 (2013), at 380.

⁶⁴ Sadeq Z. Bigdeli, *Clash of Rationalities: Revisiting the Trade and Environment Debate in Light of WTO Disputes over Green Industrial Policy*, 6(1) TRADE L. & DEV. 177-209 (2014).

⁶⁵ Timothy Meyer, *How Local Discrimination Can Promote Global Public Goods*, 95 B. U. L. REV. 1939-2037 (2015).

2. Political Economy of LCRs in India's Solar Policy

In the context of the NSM, various authors have assessed the progress of its first phase,⁶⁶ drawn lessons for policy making from the wind and solar power sectors in India,⁶⁷ and attempted to determine whether India's solar policy goals would play a significant role in cutting its contribution to climate change.⁶⁸ All these studies analyse how LCRs under the NSM, which was initially limited to the crystalline silicon technology and was waived for thin-film based solar cells, have turned India into the only large solar market with a majority of thin-film-based installations as developers preferred sourcing products from Chinese and US vendors.⁶⁹ An empirical case study on LCRs within India's solar policy supports the above finding that the initial policy on LCRs in the NSM distorted the market for solar cells and modules (in favour of thin-film technologies) without creating a robust domestic industry in return.⁷⁰ Johnson, using the effectiveness framework developed by Kuntze and Moerenhout, seeks to understand whether the LCRs in the NSM have been an effective policy tool for building a competitive local manufacturing industry. He concludes that while the use of the measure during Phase I was partially successful in promoting domestic manufacturing, it has been less successful in building longer-term innovative capabilities necessary to sustain competitiveness and make India a leading solar power.⁷¹ He writes that "[i]t remains to be seen how ongoing WTO negotiations will impact the use of LCRs in India and elsewhere" and calls for further research on finding the right policy mix that resolves the "tension between international discourses on trade and climate change".⁷²

⁶⁶ COUNCIL ON ENERGY ENV'T & WATER & NATURAL RES. DEF. COUNCIL, LAYING THE FOUNDATIONS FOR A BRIGHT FUTURE: ASSESSING PROGRESS UNDER PHASE 1 OF INDIA'S NATIONAL SOLAR MISSION (2012).

⁶⁷ Ankur Chaudhary et al., *Policy Making for Renewable Energy in India: Lessons from Wind and Solar Power Sectors*, 15(1) CLIMATE POLICY 58-87 (2014) [hereinafter *Policy Making*].

⁶⁸ VARUN SIVARAM ET AL., STAN. STEYER-TAYLOR CTR. FOR ENERGY POL'Y & FIN., REACH FOR THE SUN: HOW INDIA'S AUDACIOUS SOLAR AMBITIONS COULD MAKE OR BREAK ITS CLIMATE COMMITMENTS (Dec. 8, 2015).

⁶⁹ *Policy Making*, *supra* note 67, at 74-75.

⁷⁰ GARY ET AL., LOCAL CONTENT REQUIREMENTS, *supra* note 59. See also Anshuman Sahoo & Gireesh Shrimali, *The Effectiveness of Domestic Content Criteria in India's Solar Mission*, 62 ENERGY POL'Y 1470-80 (2013); Gireesh Shrimali & Anshuman Sahoo, *Has India's Solar Mission Increased the Deployment of Domestically Produced Solar Modules?*, 69 ENERGY POL'Y 501-09 (2014).

⁷¹ Oliver Johnson, *Promoting Green Industrial Development Through Local Content Requirements: India's National Solar Mission*, 16(2) CLIM. POL'Y 178-95 (2015), at 191.

⁷² *Id.* at 192.

Based on the above studies that carried out an economic analysis of LCRs within India's solar policy, it appears that the measure was poorly designed and not functioning as intended, i.e. to promote domestic solar manufacturing capacity. What, then, explains India's insistence to continue with the policy in the face of a threat of a WTO dispute?

3. Political Economy of Clean Energy Trade Conflicts

While the political economy argument for supporting renewable energy rests on manufacturing and innovation, scholars have extended the political economy perspective to understand renewable energy trade conflicts as well.⁷³ Lewis examines four likely drivers of trade disputes in the renewable energy sector: (1) the increasing scale of the renewable energy industry; (2) the increasing role of emerging markets, especially China; (3) the increasing imbalances between renewable energy technology producers and users, and (4) the rise of locally owned technology manufacturers in key markets.⁷⁴

Lewis warns that the escalating trade tensions will increase both the economic and political costs of deploying renewable energy technologies around the world.⁷⁵ Meyer highlights that the renewable energy sector is heavily dependent on innovation-driven products that potentially support skilled manufacturing jobs, jobs that are traditionally the domain of developed countries.⁷⁶ Ghosh describes how both industrial and trade policies contain provisions for LCRs: while industrial policies aim to promote domestic industry and nurture local jobs, trade policies prohibit protectionist measures in support of the local industry.⁷⁷ He further examines the "implications of clean energy trade conflicts on the border political economy of international energy – how prices are set, subsidies measured and treated, and the role of trade and investment regimes to govern energy globally during a time of climate-related upheaval."⁷⁸ He argues that the political economy

⁷³ *Renewable Energy*, *supra* note 36; Arunabha Ghosh, *Clean Energy Trade Conflicts: The Political Economy of a Future Energy System*, in THE PALGRAVE HANDBOOK OF THE INTERNATIONAL POLITICAL ECONOMY OF ENERGY (Thijs Van De Graf et al. eds., 2016) [hereinafter *Clean Energy Trade Conflict*]; Timothy Meyer, *The World Trade Organisation's Role in Global Energy Governance*, in THE PALGRAVE HANDBOOK OF THE INTERNATIONAL POLITICAL ECONOMY OF ENERGY (Thijs Van De Graf et al. eds., 2016) [hereinafter *Global Energy Governance*].

⁷⁴ *Renewable Energy*, *supra* note 36, at 21-27; *see also* Henok Birhanu Asmelash, *Energy Subsidies and WTO Dispute Settlement: Why Only Renewable Energy Subsidies Are Challenged*, 18(2) J. INT'L ECON. L. 261-85 (2015).

⁷⁵ *Renewable Energy*, *supra* note 36, at 29.

⁷⁶ *Global Energy Governance*, *supra* note 73, at 167.

⁷⁷ *Clean Energy Trade Conflict*, *supra* note 73, at 176.

⁷⁸ *Id.* at 177.

of clean energy trade and investment is still “unclear and unsettled”⁷⁹ and called for further research on the question: who wins and who loses?⁸⁰ Ghosh writes, “[m]uch more analysis is needed about the explicit winners and losers in each case and the domestic and international processes and institutions that mediate their interests,” and that the growing literature on green industrial policy should be expanded to include “analysis of decisions to raise disputes and the relative merits of different ways to resolve them.”⁸¹

In order to understand the increasingly complex world we live in, scholars working at the intersection of law and political economy make the case for looking at a (legal) dispute from 360 degrees. It provides an opportunity to understand how different conceptual and institutional fields work internally and in relation to each other as well as how legal institutions formalise certain political values and social interests.⁸² Other scholars have highlighted the politics of dispute settlement noting how the WTO is intervening with national decision making process, thereby making “[i]t imperative for scholars of global governance and international political economy to interrogate the working of this system”.⁸³

Therefore, the second plank of the theoretical framework is the political economy of the measure in dispute and the *Indian Solar* dispute itself. This paper applies the political economy perspective to understand the genesis of and politics behind including LCRs within India’s solar policy. Additionally, this paper dives into the political economy of the dispute settlement process during the WTO dispute. If India’s solar policy was indeed WTO-inconsistent since its inception in 2010, why wasn’t it challenged at the WTO earlier? What were the circumstances that led to the trade dispute against India’s solar policy? What were the reasons behind India not requesting formal consultations with the US despite having identified grounds for a similar challenge? This paper attempts to break down the processes, institutions and actors behind: (1) the inclusion of LCRs in India’s solar policy; (2) the decision to defend the LCRs in India’s solar policy at the WTO; and (3) the motivation to bring a counter-challenge against the US on the use of LCRs in their renewable energy programs.

⁷⁹ *Id.* at 198.

⁸⁰ *Id.* at 199.

⁸¹ *Id.* at 199.

⁸² John D. Haskell & Ugo Mattei, *Introduction*, in RESEARCH HANDBOOK ON POLITICAL ECONOMY AND LAW 3 (Ugo Mattei & John D. Haskell eds., 2015).

⁸³ Bill Pritchard, *How the Rule of the Market Rules the Law: The Political Economy of WTO Dispute Settlement as Evidenced in the US—Lamb Meat Decision*, 12(5) REV. INT’L POL. ECON. 776-803 (2005), at 798.

The next part focuses on the political economy that shaped the institutional choices behind LCRs and the political economy behind the decision to defend those institutional choices at the WTO. In doing so, this paper attempts to empirically assess the impact of the WTO dispute on solar energy regulation and governance in India.

III. UNPACKING THE POLITICAL ECONOMY OF THE *INDIAN SOLAR* DISPUTE

This part of the paper presents the findings of the empirical data, gathered through the stakeholder interviews and media discourse analysis, to answer this research study's questions. The first section describes the motivation to include LCRs within the NSM and assess whether there was a strategic reason behind enacting a protectionist policy for the solar manufacturing industry. The second section explains the reasons why India chose to contest the solar trade dispute and defend LCRs within its solar policy. The third and final section assesses the real or perceived impact of the WTO ruling on the regulation and governance of solar energy in India. This part is sub-grouped based on two thematic narratives: first, the immediate aftermath of the WTO ruling on the domestic solar manufacturing industry; and second, the Indian government's solar policy pivot at both the national and international levels through the 'Make in India' program and its leadership role in the ISA respectively.

A. The Political Economy of LCRs within the Indian Solar Policy

Although the policy choice for LCRs garners political support on the promise of "green jobs" and long-term economic competitiveness,⁸⁴ the legality of these support schemes has come under the WTO scanner for violating the "national treatment" rule. Although several countries around the world have incorporated LCRs within their renewable energy policies, not all of these measures reach the dispute settlement mechanism of the WTO. This paper attempts to understand why only a few of these infractions lead to dispute settlement at the WTO. In doing so, it begins by exploring the political economy of LCRs within India's NSM. Why were LCRs incorporated in India's solar policy in spite of their inherent trade-restrictive nature? What was the motivation behind pursuing this kind of support measure? Was there a particular justification for protectionism in the renewable energy sector?

⁸⁴ KUNTZE & MOERENHOUT, LOCAL CONTENT REQUIREMENTS, *supra* note 36; STEPHENSON, LOCAL CONTENT REQUIREMENTS, *supra* note 36; *Renewable Energy*, *supra* note 36.

One of the stated targets of the NSM was to “create favourable conditions for solar manufacturing capability, particularly solar thermal for indigenous production and market leadership”, even though it did not explicitly envisage the inclusion of LCRs within the solar policy.⁸⁵ Based on Kuntz and Moerenhout’s classification of why LCRs find their way into renewable energy policies,⁸⁶ this chapter empirically assesses the political economy of the LCRs within India’s policy to determine if it was: first, used as a tool to augment public support for renewable energy support measures; second, intended to protect the domestic “infant” industry; third, motivated by the creation of “green jobs”; or fourth, promoted for the potential environmental benefits from renewable energy. Interestingly, during the proceedings before the Panel, India stressed that the LCR measures must be viewed in light of the broader objectives guiding the NSM, including the attainment of energy security, ensuring ecologically sustainable growth, and ensuring sustainable development.⁸⁷ The following sub-sections, however, illustrate that this line of defence was an afterthought rather than the underlying motivation for the LCRs.

1. The Rationale behind LCRs

The NSM came on the heels of India’s National Action Plan on Climate Change (NAPCC), which was announced in the lead up to the Copenhagen Climate Change Conference held in 2009. During the formulation of the NAPCC, the primary objective was to announce India’s position on climate action. The NAPCC process was driven by the aim to find options for the use of energy in a manner that optimises the energy mix in the country. The NAPCC provides that a National Solar Mission will be launched “to significantly increase the share of solar energy in the total energy mix while recognising the needs to expand the scope of other renewables and non-fossil options”.⁸⁸ The NAPCC identifies solar energy as “an extremely clean form of energy generation with practically no form of emissions at the point of generation”.⁸⁹

⁸⁵ GOVERNMENT OF INDIA, MIN. OF NEW & RENEWABLE ENERGY, MISSION DOCUMENT, JAWAHARLAL NEHRU NATIONAL SOLAR MISSION: TOWARDS BUILDING SOLAR INDIA (2012), http://www.mnre.gov.in/file-manager/UserFiles/mission_document_JNNSM.pdf.

⁸⁶ KUNTZE & MOERENHOUT, LOCAL CONTENT REQUIREMENTS, *supra* note 36.

⁸⁷ Indian Solar dispute, *supra* note 11, at ¶7.17.

⁸⁸ GOVERNMENT OF INDIA, MIN. OF ENV’T & FORESTS, NATIONAL ACTION PLAN ON CLIMATE CHANGE (2009), http://www.moef.nic.in/modules/about-the-ministry/CCD/NAP_E.pdf.

⁸⁹ *Id.* at 20.

The creators of the initial solar policy envisaged that it would “lead to energy security through the displacement of coal and petroleum”.⁹⁰ To quote a senior official of the Indian Administrative Services, who was at the Ministry of Environment, Forests and Climate Change during the creation of the NAPCC, “manufacturing was a distant objective and secondary at that time, the fundamental push (for the NSM) came from the fact that India needed to move towards renewables.”⁹¹ A senior energy expert who advised the Government of India during the NAPCC process affirms that India’s initial policies on climate change, including the NSM, were not a domestically-driven initiative, but were rather purely driven by external demand i.e. the Copenhagen Climate Change Conference. The document was created for the external world in order to outline India’s position and commitments on climate action, and was not motivated by a domestic manufacturing agenda.⁹²

Following the launch of the NAPCC, a sub-group within the Prime Minister’s Council on Climate Change was tasked with coming up with the “nuts and bolts of the solar policy”.⁹³ At this stage, it was decided that one of the policy elements of the NSM would be the public procurement of 1000 MW of solar power through NTPC Limited⁹⁴— an Indian Public Sector Undertaking and India’s largest power utility. The Ministry of New and Renewable Energy (MNRE), the nodal ministry for the implementation of the NSM, was responsible for all future guidelines and policies on solar energy.

Under the NSM, in order to facilitate grid connected solar power generation, the MNRE through NTPC Ltd. entered into long-term Power Purchase Agreements (PPAs) with solar power developers to purchase the solar power generated by them, providing a guaranteed rate for a 25-year period. Following the purchase, NTPC Ltd. would resell the electricity to downstream distribution utilities, which would ultimately sell it to the final consumer.⁹⁵ Solar photovoltaic (PV) projects are developed primarily across two technologies: solar crystalline silicone and solar thin-film. The guidelines issued by MNRE for the selection of solar PV projects under the first phase of the NSM made it mandatory for all projects based on crystalline silicon technology to use the modules manufactured in India, while solar

⁹⁰ *Id.*

⁹¹ Interview with Senior Government Official, Min. of Env’t, Forest & Climate Change, in New Delhi, India (Dec. 14, 2016) [hereinafter Interview #11].

⁹² Telephonic Interview with Energy Expert (Dec. 14, 2016) [hereinafter Interview #14].

⁹³ Interview with Head of a Research Org. & Former Member of Prime Minister’s Council on Climate Change, in New Delhi, India (Dec. 6, 2016) [hereinafter Interview #2].

⁹⁴ Formerly known as National Thermal Power Corporation.

⁹⁵ For a detailed discussion on the facts of the case, please see ¶7.1 to 7.14 of the *Indian Solar dispute*, Panel Report, *supra* note 11, at 31-35.

PV projects based on thin-film technologies were kept outside the purview of government procurement of solar power. At the time, the government decided not to apply the LCR rule to thin-film technologies since there was only one player in the domestic market for thin-film technologies and it would have given them the monopoly.⁹⁶

2. Misplaced Motivation

According to one government official, who was closely involved in the creation and implementation of the NSM, the initial motivation for LCRs came from the Mission Document which provided the basis for MNRE's thrust on local manufacturing.⁹⁷ However, according to another MNRE official, this was a case of "misplaced motivation" as it was thought that there was no way forward on achieving the solar targets without a local manufacturing capability.⁹⁸ He noted that solar was never considered a "strategic" energy choice for the country for there was never a vision within the MNRE to go beyond targets and create a full value chain around solar energy. Another interviewee noted how this move merely indicated the ruling government's socialist and self-reliant bent of mind and seemed impervious to the fact that there had been no local development in solar manufacturing up until then.⁹⁹

According to some interviewees, a crucial factor to be noted is that the scale of domestic solar manufacturing was very limited. The LCR measures were applicable only on 1000 MW of the total 22,000 MW target for solar power. Therefore, the government was merely looking at LCRs as an opportunity to not let the domestic solar manufacturing industry die down in the face of global competition. Moreover, LCRs would have increased the manufacturing costs under all circumstances and the government procurement appeared to be mere "tokenism";¹⁰⁰ this view was backed by many of the interviewees, who noted that there was very little evidence to show the presence of a strong domestic industry lobby in favour of the LCR rule. Instead, the LCR rule seems to have been instituted at the behest of a single bureaucrat who believed that local manufacturing was essential to achieve the solar targets.

⁹⁶ Telephonic Interview with a Government Official, formerly in the Min. of New & Renw'ble Energy (Dec. 14 & 16, 2016) [hereinafter Interview #17].

⁹⁷ *Id.*

⁹⁸ Interview with a Government Official, Min. of New & Renw'ble Energy, in New Delhi, India (Dec. 8, 2016) [hereinafter Interview #5].

⁹⁹ Telephonic Interview with an Indian Solar Energy Entrepreneur (Feb. 6, 2017) [hereinafter Interview #22].

¹⁰⁰ *Id.*

A policy expert who has followed the progress of the NSM closely attests to the fact that when the solar policy was formulated, the notion of LCR was not thought through as having trade implications. Simply put, it was a technical ministry which came to a “fairly heuristic” conclusion that if there was a national target, then a part of it should be developed at home.¹⁰¹

The overwhelming view within the MNRE was that a localisation provision would help develop the local industry by creating a manufacturing base and allowing them to keep up-to-date with development in technology.¹⁰² Government officials in the Ministry of Commerce and Industry (MoCI), however, recall that the MNRE continued with the LCR measure despite contrary advice from them. As a senior official of the Indian Administrative Services, who was formerly in the MoCI noted:

“India was not inclined to be wiped away in manufacturing of solar industry. It wanted to retain that base, knowing fully well that it was not competitive. Clearly it had no large scope, but it wanted that small space for its own industry. This whole dimension of “green jobs” related to this litigation – I doubt anyone has said it. How many jobs would 10 or 20% LCR even create? Solar power projects creating jobs is a different issue, but the LCR in itself was not promoting this. I don’t think jobs were ever a driving force behind this. It was entirely about wanting to keep doing something in solar energy as it was an important space for India.”¹⁰³

Several interviewees across policy think tanks, civil society and the industry agreed that the idea of “green jobs” was a complete afterthought. On the question of the inclusion of LCRs in the NSM to promote “green jobs”, one interviewee said that he would be “surprised” if there was a strategic explanation for the LCRs based on generating more jobs in the economy.¹⁰⁴ Neither the NAPCC, nor the Mission Document emphasised job creation as a primary objective of the solar policy; even if these documents did mention solar manufacturing capability, the overwhelming view among the interviewees is that the notion of domestic solar manufacturing was a complete myth. For the domestic solar manufacturing to have become a

¹⁰¹ Interview with Head of a Policy Think Tank, in New Delhi, India (Dec. 16, 2016) [hereinafter Interview #15].

¹⁰² Interview with ex-Senior Official of the Indian Admin. Serv., formerly in the Min. of Commerce & Indus., in New Delhi, India (Dec. 14, 2016) [hereinafter Interview #10].

¹⁰³ *Id.*

¹⁰⁴ Interview with Senior Expert in a Policy Think Tank, in New Delhi, India (Dec. 12, 2016) [hereinafter Interview #8].

success, the government needed pre-established (and successful) semiconductor and manufacturing policies. Without that, many of the interviewees argued that there was no way to turn India into a manufacturing hub for solar energy.

The government's argument for boosting the production of solar energy through LCRs, however, did not cut any ice with the legal actors interviewed during this research study. One interviewee noted that the solar energy could have been incentivised in a WTO-compatible way;¹⁰⁵ another interviewee said that the NSM was essentially a WTO-inconsistent industrial policy to establish India as a "big player" in the solar power sector;¹⁰⁶ yet another interviewee cited the Mission Document as being the "most concrete evidence" of its intention to create a domestic industry.¹⁰⁷

From a legal perspective, it seems easy to argue that the LCR was geared towards enhancing India's solar manufacturing capacity and jobs, but several interviewees were sceptical about the solar manufacturing sector driving the economy. In order for the LCR measure to be an effective tool for protecting and promoting the local industry, most of the interviewees said that India needed pre-existing research and development in solar manufacturing. As it stood, the LCR rule was providing an incentive structure based on what one or two companies were doing. According to one interviewee, "a long-term stake will come when a country has also invested in manufacturing as well as in believing that it is a part of the economy."¹⁰⁸ In this case, it appears that India had neither demonstrated a manufacturing capacity nor pushed for LCRs on the grounds of creating and adding "green jobs" to the local economy.

3. Token Protectionism

Following the first phase of the NSM, it was realised that several companies had bypassed the LCR rule and opted for the cheaper thin-film technologies. As a result, the Indian market for solar PV projects differed greatly from the global norm for it skewed heavily towards thin-film technologies and away from crystalline silicone technologies, which was the opposite of global norms. One of the driving forces for the use of thin-film technologies was the US EXIM Bank's financing obligations: concessional finance for solar power developed at low

¹⁰⁵ Interview with Professor of Int'l Trade & Inv. Law, in New Delhi, India (Dec. 13, 2016) [hereinafter Interview #9].

¹⁰⁶ Telephonic Interview with Professor of Int'l Trade Law (Jan. 28, 2017) [hereinafter Interview #21].

¹⁰⁷ Interview with Trade Lawyer, in New Delhi, India (Dec. 8, 2016) [hereinafter Interview #4].

¹⁰⁸ Interview #2, *supra* note 93.

interest rates, but contingent on the use of US-manufactured thin-film cells and modules.¹⁰⁹ It was only at this point, at the end of the first phase of NSM, that several players realised that India had the potential to become a “big market” for solar.

For the second phase of the NSM, in order to correct the imbalance in technology diffusion, the government decided to extend the LCR rule to thin-film technologies as well. Under this revised policy, two Indian companies ended up being the main beneficiaries of the government’s support measures: Moser Baer and IndoSolar. Following this move, the US alleged that the LCR rule was in violation of WTO rules.¹¹⁰

At this point, one of the available options for India was to dismantle the LCR rule within the NSM. According to a majority of interviewees the Commerce Ministry advised the MNRE to remove the LCR rule for a variety of reasons: (1) it was legally untenable under the WTO rules, (2) almost 90% of the components being used by the domestic manufacturers were being imported, (3) the rule covered only 1000 MW of solar power generation and did not add to the rhetoric of building a strong solar manufacturing landscape and (4) other Indian states, such as Gujarat, were successfully pursuing solar policies without imposing similar LCR rules. Yet, the LCR measure remained in place.

A strong justification of the LCR rule continued on the understanding that it would be covered under the government procurement exception; according to several interviewees, the widespread belief within the government was that the measure would qualify as government procurement. Within the bureaucratic circles there was a prevailing view that the LCR methodology had been applied with some success in the past, especially in the automobiles sector and that it could similarly ride through a WTO challenge in the solar energy sector. As a senior officer of the Indian Administrative Services noted, it is a matter of “finding the right balance between promoting the industry through lawful means and through means that can stand the test of law”.¹¹¹ As a trade lawyer noted:

“Not every country designs every policy thinking of WTO implications. You often take a call that you want to have a policy for whatever other reasons you may have. And indeed, when it gets challenged, you tackle it as and when it comes. WTO rulings are prospective in nature and you can try to achieve what you can

¹⁰⁹ CEEW/NRDC Report, *supra* note 66. Also, Interview #17; Interview with Senior Expert in a Research Org. (Dec. 6, 2016) [Interview #3].

¹¹⁰ See the politics behind the US bringing the dispute to the WTO is detailed in Part IV.B.

¹¹¹ Interview #11, *supra* note 91.

it the time the dispute plays out. Perhaps, it was thought that since most countries are adopting similar policies [LCRs in renewable energy policies], it [the NSM] is unlikely to be challenged. But once Canada (FIT) was challenged it became anybody's guess who would be next".¹¹²

Still, many interviewees were of the view that it would have been easier to defend the LCR measure if (1) there had been investment in creating a domestic industry via research and capital and (2) there was a full-fledged solar landscape supporting the domestic industry. According to one interviewee, if the above had indeed been the case "we should have gone ahead and tried to protect them, drag for time till the industry finds its feet. We should have done it shamelessly. But not for such a silly thing—when 90% of the value of the products was being imported, what "local industry" are we trying to protect?"¹¹³

4. New Government, New Rationale for the Policy

The solar dispute also ended up as a reflection of the dichotomy in India's thinking on the issue of LCRs, which had got complicated with the transition in the political setup after the 2014 general elections. The new government came up with an ambitious power generation program and looked at the issue of local manufacturing in a completely new light. The new Prime Minister had a strong solar agenda and backed it with a strong manufacturing focus.¹¹⁴ As a result, the perspective on the solar trade dispute completely changed with the change in ruling party. The earlier government's arguments on technology continuity and maintaining a small manufacturing base was superimposed by the new government's ambitious solar targets. According to one interviewee, the new government's insistence on defending the LCR rule was "a contrarian approach" given its revamped solar targets.¹¹⁵ Thus, there was a clear conflict between the two policies as the huge demands generated by the high ambitions of the new government would not have been met with more expensive locally-manufactured equipment. This further complicated a crucial issue from India's point of view: energy security.

¹¹² Interview #4, *supra* note 107.

¹¹³ Interview with Former Ambassador of India to the WTO, in New Delhi, India (Dec. 9, 2016) [hereinafter Interview #7].

¹¹⁴ See generally PIB Press Release, *supra* note 13; Press Information Bureau, *Prime Minister to Launch 'Make in India' Initiative* (Sept. 24, 2014), <http://pib.nic.in/newsite/PrintRelease.aspx?relid=109953>; Press Information Bureau, *'Make in India' Programme* (July 24, 2015), <http://pib.nic.in/newsite/PrintRelease.aspx?relid=123724>.

¹¹⁵ Interview #10, *supra* note 102.

The prevailing line of thought among the solar power developers has been that the LCR measures raise the costs of raw materials and that it is preferable to choose the cheapest available materials, even if it means importing them is the viable option. But, the intellectual view on this issue could be very different from the business view; according to one interviewee:

“A critical consideration for a country is whether it wants to incentivise entrepreneurs/industry for energy security as a user (where they could import cheap parts from other countries and have no domestic manufacturing capability) or as a producer and user (create a domestic manufacturing base that would also provide jobs)”.¹¹⁶

The business view always remains geared towards the cost competitiveness of such an enterprise; but in order to engage people into the benefits of climate change, it becomes imperative to promise job creation and wealth generation. In light of this, several interviewees were critical of the American stance of taking India to the WTO. According to one:

“I hold the US more accountable, or responsible for the way it (dispute, emphasis added) played out. I think there was an element of inflexibility, where India was being used to “set an example” or as a “flag” to other potentially larger trade partners who could actually impact US competitiveness. Indian manufacturers were barely going to make a dent (to US competitiveness, emphasis added).”¹¹⁷

This, even as one trade lawyer noted, “I refuse to believe solar mission was target. It was really in terms of whether such a policy can be replicated in other sectors, which perhaps was a driving factor (for the dispute).”¹¹⁸

Going by the four criterion described by Kuntz and Moerenhout, described earlier in this section, there is little evidence to suggest that the LCR rule was politically motivated and inserted in the NSM as a concerted effort to protect the “infant” domestic industry or to create “green jobs”.¹¹⁹ Interviewees across the government

¹¹⁶ Interview #22, *supra* note 99.

¹¹⁷ Interview #15, *supra* note 101.

¹¹⁸ Interview #4, *supra* note 107.

¹¹⁹ Interestingly, in the media discourse analysis, a search for the term “green jobs” within the 173 articles yielded only one result: an article carrying the quote of a representative from Greenpeace who said that the WTO ruling comes as a setback to fighting climate

and civil society believe that in order to achieve a long-term stake for solar power in the country it would be necessary to invest in local manufacturing so as to create a full-service ecosystem around solar energy; however, most of them were quick to add that there was no such broad policy objective guiding the inclusion of LCRs in the NSM. According to several interviewees the early inclusion and implementation of such a protectionist measure within the NSM was an act of mere tokenism enacted to benefit only a handful of companies that occupied a very small share in the wider solar energy landscape in India. In the backdrop of the new government ramping up the country's solar energy targets and providing a major thrust for manufacturing in India, the ill-advised LCR policy found a new set of defenders. The reason, most of them agreed, for the protracted solar trade dispute was the different perspective with which the new government viewed the LCR policy. The next section attempts to describe the main drivers and underlying politics of the solar trade dispute.

B. The Drivers and Underlying Politics of the Solar Trade Dispute

This section looks at the reasons for the protracted solar trade dispute between India and the United States (Figure 2). The dispute officially began in February 2013, when the United States requested formal consultations with India at the WTO. Under the WTO regime, if the mandatory consultations fail to produce a satisfactory settlement within 60 days, then the complainant may request adjudication by a Panel.¹²⁰ In February 2014, a year later, the United States requested supplementary consultations with India. This second round of consultations, ultimately, led to the creation of the Panel in April 2014. Interestingly, after the first round of consultations between the two countries, India had filed a request for information with the WTO Committees on Subsidies and Countervailing Measures and Trade-Related Investment Measures in April 2013. India sought information from the United States with respect to LCRs in specific renewable energy sector subsidy programs in the states of Delaware, Minnesota, Massachusetts and Connecticut.¹²¹ However, India did not raise a

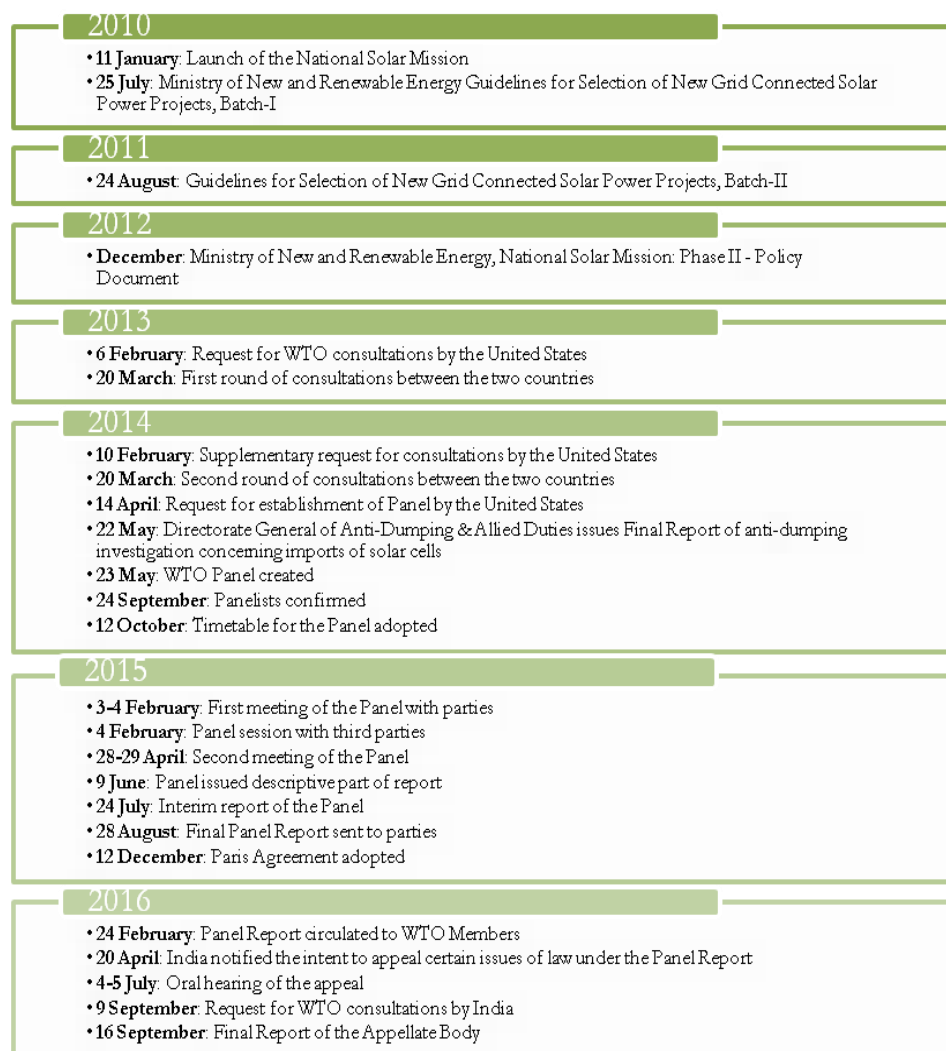
change: "India's setting of the DCR was based on a worthy core principle: Increasing economic opportunities and creating thousands of green jobs while taking critically important steps in the global fight against climate change" in Jayashree Nandi, *WTO Ruling May Hit Solar Cos' \$100bn Opportunity*, THE TIMES OF INDIA, Mar. 5, 2016, <http://timesofindia.indiatimes.com/business/india-business/WTO-ruling-may-hit-solar-cos-100bn-opportunity/articleshow/51263358.cms>.

¹²⁰ Understanding on Rules and Procedures Governing the Settlement of Disputes art. 4.7, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organisation, Annex 2, 1869 U.N.T.S. 401.

¹²¹ *Minutes of the Regular Meeting*, supra note 17.

formal counter-challenge at the WTO until 9 September 2016,¹²² exactly a week before the Appellate Body's final decision in the *Indian Solar* dispute.

Figure 1: Timeline of the WTO dispute, and related domestic and international developments



Source: Author's own analysis

¹²² Request for Consultations by India, *United States—Certain Measures Relating to the Renewable Energy Sector*, WTO Doc, WT/DS510/1 (Sept. 9, 2016).

This section proceeds in three parts: First, it explores the underpinnings of the US complaint at the WTO, as well as the latent Indian counter challenge against similar measures within state-level renewable energy policies in the US. Second, it delves into the series of bilateral consultations, and conversations, between the two countries during the dispute resolution process. Third, it explores why India ultimately brought the counter-dispute against the US and examines the effectiveness (or futility) of the effort.

1. The Making of the Solar Trade Dispute

1.1 US Trade Interests

The primary motivation for the United States Trade Representative (USTR) to initiate the WTO dispute against India was to create a level playing field for American solar cells and module manufacturers in India's solar market. The request for consultations was meant to raise concerns over some protectionist measures in India's solar policy and to ensure that it was not being discriminatory towards goods from the US. Although the issue touched upon different facets, including India's solar ambitions forming the basis of its climate commitments, the USTR was only tasked with "enforcing international trade rules".¹²³ The basis for launching a WTO dispute against a country rests on USTR's "open door policy", which allows aggrieved stakeholders to come with concerns over a foreign country's measure.¹²⁴ In this case, there was intense domestic lobbying in the United States to bring a WTO dispute against India's solar policy. In June 2013, John Smirnow, the Vice President of the Solar Energy Industries Association (SEIA) testified before the U.S. Congress on India's use of local content requirement in its solar policy, which discriminates against U.S. solar exports and provides an unfair competitive advantage to India's domestic solar manufacturers.¹²⁵ His testimony, in part, read: "Our only hope is that the U.S. government's recent decision to initiate WTO dispute settlement proceedings against the LCR will eventually cause India to reverse course."¹²⁶

The US had raised concerns over the use of LCRs in India's solar policy well before the launch of the formal consultations at the WTO, particularly during the

¹²³ Telephonic Interview with the U.S. Trade Rep. Official (Jan. 27, 2017) [hereinafter Interview #20].

¹²⁴ Interview #20, *supra* note 123.

¹²⁵ Comm. on Energy & Commerce, *A Tangle of Trade Barriers: How India's Industrial Policy is Hurting U.S. Companies*, (June 27, 2013), <http://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=101056>.

¹²⁶ *Id.*

India-US Trade Policy Forum. The testimony of Mr. Smirnow also indicates that the U.S. government first tried to establish a collaborative dialogue with India regarding the use of LCRs and requested formal consultations before the WTO as a last resort effort to get India drop the use of such protectionist measures.¹²⁷

Several interviewees were of the view that the dispute was motivated squarely by trade interests and the American desire to get into the Indian solar market. As one interviewee remarked: “Who’s bothered about other countries [about LCRs within their renewable energy policies]? It [this dispute] is because of the size of the Indian market for the next 20-30 years.”¹²⁸ Some others felt that the dispute was not necessarily targeting India’s solar ambitions, rather it was fundamentally a “symbolic dispute” undertaken to send a signal that such a policy cannot be replicated in other sectors.¹²⁹ In addition, several interviewees suggested that the anti-dumping investigation initiated by Indian authorities against American solar cells and modules cannot be disregarded when trying to uncover the “big picture” behind this WTO dispute.

1.2 The Bigger Picture: Anti-dumping Duties

In the backdrop of the WTO dispute brewing between the two countries, India had initiated an anti-dumping investigation against imports of solar cells and modules from China, United States and Malaysia in November 2012. The Directorate General of Anti-dumping & Allied Duties (DGAD) proceeded to initiate this investigation at the behest of Indian solar manufacturers who complained that solar cells and modules were being dumped into India by exporters from these countries. In May 2014, the DGAD ruled in favour of the domestic solar manufacturers and recommended an anti-dumping duty on solar cells and modules from China, United States and Malaysia.

Although the complaint was brought before the DGAD by domestic solar manufacturers, there was a distinct divergence in the views held by the solar manufacturers and the solar power developers in India. While the manufacturers pushed for the imposition of anti-dumping duty, the public opinion held by the developers was that an anti-dumping duty would increase the prices of developing solar power projects due to more expensive imports.

Furthermore, the final decision of the DGAD came on 22nd May 2014, five days before the new government took office. On 26th May 2014, there was a change in the Central Government and the National Democratic Alliance (NDA) led by the

¹²⁷ *Id.*

¹²⁸ Interview #7, *supra* note 113.

¹²⁹ Interview #4, *supra* note 107.

Bhartiya Janata Party came to power.¹³⁰ With the change in government the prevailing view of the developers found favour with the new government that decided not to impose the anti-dumping duty on solar cells and modules.¹³¹ Although the local solar manufacturing industry had won their case before the DGAD, the NDA government took a strong position to not support the imposition of the anti-dumping duty as it would have considerably raised the price of solar power in the country. Around the same time, the government met with representatives of the domestic solar manufacturing industry who agreed to not press for anti-dumping duty if they were given a certain assured market.¹³² Therefore, the government continued with its decision to not impose anti-dumping duty on solar cells and modules, including on imports from American manufacturers, and proceeded to revise India's solar targets from 22 GW to 100 GW of solar power by 2022.¹³³ As one of the interviewees noted:

“Finance Ministry in its wisdom did not impose the (anti-dumping) duty. We don't have the capacity to make solar cells or modules in the country; we have to buy it from outside. If we were to impose an anti-dumping duty just to protect an alleged domestic industry, where 90% of components itself are being imported, power costs would have risen and the expansion of solar energy would have suffered. Finance Ministry made the right decision— they have to look at national interest rather than the interest of a particular domestic industry which is calling for protection.”¹³⁴

2. The Stages of Consultations

2.1 *The Beginning: Early Request for WTO Consultations*

¹³⁰ *Narendra Modi takes oath as India's 15th Prime Minister*, THE INDIAN EXPRESS, May 26, 2014, <http://indianexpress.com/article/india/politics/live-narendra-modi-swearing-in-ceremony-today-may-26/>.

¹³¹ *India not to Impose Anti-dumping Duty on Solar Panels: Nirmala*, THE HINDU Sept. 10, 2014, <http://www.thehindu.com/business/Economy/india-not-to-impose-antidumping-duty-on-solar-panels-nirmala/article6397475.ece>; Press Trust of India; *Govt Drops Anti-dumping Duty on Solar Panel Imports from US, China*, BUSINESS STANDARD Sept. 10, 2014, http://www.business-standard.com/article/pti-stories/india-not-to-impose-anti-dumping-duty-on-solar-panels-nirmala-114091000659_1.html.

¹³² Interview #17, *supra* note 96.

¹³³ PIB Press Release, *supra* note 13.

¹³⁴ Interview #7, *supra* note 113.

The MoCI is India's nodal ministry for all matters relating to trade policy and the WTO. The MNRE is the nodal ministry in charge of the National Solar Mission. The Ministry of Environment, Forests and Climate Change (MoEFCC), meanwhile, is responsible for India's engagement with the international climate change regimes under the UNFCCC.

The early WTO consultations happened in a "textbook manner", for the USTR sent questions about certain aspects of the NSM and India provided written answers about the scope and substantive provisions of the NSM.¹³⁵ The MoCI led India's conversations with the USTR, while the MNRE remained involved in providing the information about the solar policy at all stages of the case.¹³⁶ In keeping with the MoCI's practice, the case was outsourced to a domestic law firm, Clarus Law Associates, which handled India's defence at the WTO. According to several interviewees, the MoEFCC was not a part of either the early consultations or the dispute settlement proceedings at the WTO. In terms of the year-long gap between the first request for consultations (February 2013) and the supplementary consultations (February 2014), trade lawyers agreed that it is not unusual for countries to have long consultations.¹³⁷

2.2 *New Government, New Outlook on the Dispute*

The two countries had been discussing the LCR provisions under the NSM prior to the formal WTO consultations. In fact, the MoCI had flagged the issue of WTO incompatibility of certain measures within India's NSM well before the initiation of the formal dispute. As a trade lawyer noted,

"The way policymaking works (in India, emphasis added), even before any policy is put forth in the public domain, it is vetted by other ministries. The Commerce Ministry had always been very clear that there will be a WTO compatibility issue. Especially when Canada got challenged, they were very clear in their advice. The basic elements of inter-ministerial work are present; no one does anything in isolation. There is always a debate and discussion and awareness of possible risks to go forward and to decide how to attack it."¹³⁸

¹³⁵ Interview with a Trade Lawyer, in New Delhi, India (Dec. 14, 2016) [hereinafter Interview #13].

¹³⁶ Telephonic Interview with a Government Official, Min.of Commerce & Indus. (Jan. 17, 2017) [hereinafter, Interview #19]. See also Interview #5, *supra* note 98; Interview #13, *supra* note 135; Interview #15, *supra* note 101.

¹³⁷ Interview #4, *supra* note 107; Interview #20, *supra* note 123.

¹³⁸ Interview #4, *supra* note 107.

Despite receiving contrary advice from the MoCI, the MNRE continued defending the provisions on LCRs. Now the basis for defending the measure, however, was to assure a small market for the faltering domestic industry. Since the government had decided to suspend the levy of anti-dumping duty, the MNRE's insistence on LCRs was merely to assure a small market to the domestic players who were "in a very bad shape".¹³⁹ Although the domestic solar manufacturers wanted a much larger percentage of LCRs, the MNRE's main objective was to keep the prices of solar power low and to open the solar energy market in order to sustain the broader goals of the NSM.

2.3 Bilateral Talks to End the Dispute

The commonly held view among several interviewees was that India would not have won the case at the WTO and India's insistence to contest the case at the WTO made little strategic sense. The WTO Panel, unsurprisingly, ruled against India and held that the LCRs in the NSM were in violation of WTO rules. The Panel circulated its final report to the parties on 27 August 2015; however, the final report was published only in February 2016. According to several interviewees, the only reason for the delay in the publication of the Panel Report was because the parties were still taking to each other and had requested for the Panel Report to not be published. Between August 2015 and February 2016, there appears to have been a series of bilateral talks between the Indian Power Minister, Mr. Piyush Goyal and the USTR in order to settle the dispute and arrive at a deal which could sidestep the judgment of the Panel; these discussions took place over several video and phone-in conferences. Interviewees who were privy to these conversations agree that this was an "informal process" or a "backdoor effort" on part of the two governments to mutually settle the dispute before the Panel Report was published.¹⁴⁰

Crucially, one of the most significant aspects during this phase was the side-lining of the MoCI. After circulation of the Panel Report, the Power Minister, Mr. Piyush Goyal, is said to have convened a closed-door meeting with trade lawyers to seek their opinion on how the NSM could be covered by the government procurement exception. The view within the MoCI, however, remained sceptical. As one interviewee puts it: "why was that [bilateral talks] happening? I don't know. If you have violated an agreement and if your industrial or economic situation has not changed— you have neither become competitive nor have you been able to set up a large manufacturing capacity for solar panels— then how does it matter? A ruling

¹³⁹ Interview #17, *supra* note 96.

¹⁴⁰ Interview #13, *supra* note 135; Interview #21, *supra* note 106.

has come against you, [sic] you accept it and move forward.”¹⁴¹ Another interviewee remarked that the Power Minister, Mr. Piyush Goyal, “had too much faith in Mike Froman and his own persuasive skills, which was terribly misplaced.”¹⁴²

India’s main thrust during these negotiations was that it did not impose anti-dumping duties on American solar cells and modules with the expectation that the US would not proceed with the dispute at the WTO. In order to settle the dispute, India was ready to remove the TRIMS-inconsistent provisions as long as its public utilities could procure locally-made solar cells and modules. As part of the negotiated settlement, India agreed to change its policy but did not want the final Panel Report to be published. The US, on the other hand, stressed that it had initiated the dispute on the ground that it is a matter of principle and insisted on the circulation of the Panel Report in spite of arriving at a mutually agreeable solution. Ultimately, the bilateral talks appear to have broken down on the question of publishing the Panel Report. Once the Panel Report was published, it was only a matter of time before India went into appeal.

However, one of the interviewees expressed serious concerns over the process of informal talks and argued that it undermines the legitimacy of the WTO. He noted:

“It is an unfortunate situation – speaking purely from the rule of law point of view – why have dispute settlement at all? If the WTO provides for a consultations stage to resolve issues, then why delve into it after the Panel Report? The idea of a dispute settlement process is to reach settlement of disputes through rule of law instead of diplomacy. But you’re bringing back the element of diplomacy into rule of law, which doesn’t make sense. To some extent it is undermining the legitimacy of WTO. The signal is that if the decision is unfavourable towards you, you can still negotiate with the country and try to resolve the dispute. It puts a question mark on the legitimacy on the entire dispute settlement process.”¹⁴³

3. Geopolitics of the Counter Challenge against United States

If India had identified similar LCRs within renewable energy support programs in the United States in 2013, why did it not bring the counter-challenge against the US earlier? One of the themes emerging from several interviewees is that India has

¹⁴¹ Interview #10, *supra* note 102.

¹⁴² Interview #7, *supra* note 113.

¹⁴³ Interview #9, *supra* note 105.

no trade or commercial interests in the American solar industry. As one respondent puts it:

“India is not a major exporter to the United States – so why bother? Independently this case would have never gone to the WTO, so the tit-for-tat complaint never made any sense.”¹⁴⁴

Within the government, the understanding was that even though the US measures don’t impact Indian exports, it could have pursued the counter challenge as an “in principle” dispute. As a result, it had begun the process of examining the rules and building a case as far back as 2013-14. However, one of the main reasons for not bringing a formal complaint against the US was the political undercurrents between the two countries. In 2013, it was the diplomatic row over the arrest of an Indian diplomat, Devyani Khobragade, in New York that made matters tense between the two countries. In 2014, it appears that with a new government in power India did not want to strain its relations with the US by raising a trade dispute. Further in 2016, there was additional debate over whether India should bring a formal dispute against the US, especially since the US had supported India in the wake of the Uri terror attacks. As one interviewee noted:

“This always happens with the United States. They bring a case based purely on trade interests, whereas for India it is never primarily trade interests but the larger geopolitical issues that determine whether a WTO dispute will be brought against the US.”¹⁴⁵

Several interviewees felt that that India should have pursued the counter challenge as a strategic move and considered the leverage it could have gained over the US. An overwhelming view that is emerging is that India lost on leveraging power by not bringing the counter-dispute against the US and it now appears to be a classic case of too-little-too-late. As one respondent notes, “it infuriates me that India did not file the challenge 3 or 4 years back. I firmly believe that if India had challenged it, the US would not have gone ahead with the Panel. I am convinced about that.”¹⁴⁶

This section finds several underlying political factors that led to a protracted trade dispute between India and the US. A combination of protectionist LCRs in India’s solar policy, American trade interests in India’s solar market and India’s anti-dumping investigation initiated against imports of solar cells from the US raised

¹⁴⁴ Interview #21, *supra* note 106.

¹⁴⁵ Interview #13, *supra* note 135.

¹⁴⁶ Interview #4, *supra* note 107.

tensions between the two countries. In addition, India witnessed a change in the ruling party while the WTO dispute was ongoing. The new government took a new position on the disputed policy measure, as a result of which the WTO dispute took a new turn. The two countries also entered into a series of bilateral consultations to settle the dispute after the Panel Report— a clear departure from the formal rules under WTO dispute resolution mechanism. Moreover, India's counter-challenge against the US on similar measures, which according to several stakeholders could have provided India with considerable leveraging power to settle the dispute, was delayed owing to the complicated geopolitics of India-US relations.

C. *The Real and Perceived Impact of the WTO Ruling*

This section details the findings of the research study on the real or perceived impact of the WTO ruling in the *Indian Solar* dispute on the regulation and governance of solar energy. The first, and most immediate, impact of the ruling has been on the domestic solar manufacturing industry. The WTO dispute has retarded the domestic solar manufacturing industry and destroyed their expansion plans. The second impact is visible in the governance of solar energy, both at the national and international level.

1. Aftermath of the WTO Ruling on Domestic Solar Manufacturers

Although India lost the solar trade dispute at the WTO, there weren't any political repercussions for two reasons: first, internally, there is an understanding that India is not geared towards manufacturing, at most it could be a hub for assembly; and second, there is a strong public opinion in India that the price of solar energy is low largely because of cheap imports. As a result, the WTO ruling was immaterial for India as it didn't change the status quo. Several stakeholders agreed that removing the provisions on LCRs would not detract India from achieving its goal: meeting 100GW of solar power by 2022. Rather, the solar targets could be achieved in a much more cost-effective manner through cheaper imports. Therefore, the solar power generating sector are "very happy" for the "level playing field".¹⁴⁷

The forecast for the solar manufacturing sector is not as bright. The immediate impact of the WTO decision and phasing out of the LCRs has been on Indian solar manufacturers. According to one interviewee, the WTO ruling has "destroyed ambitions of domestic manufacturers, ruined their expansion plans and left them bleeding".¹⁴⁸ The two companies who had invested in setting up a fabrication and

¹⁴⁷ Interview #7, *supra* note 113.

¹⁴⁸ Interview #5, *supra* note 98.

assembly plant, Moser Baer and IndoSolar, have lost out the most. According another interviewee, these companies had begun scaling down on manufacturing and pivoted their business models towards generation of clean energy.¹⁴⁹

The government, meanwhile, has a clear ambition of reaching its clean energy goal of 175 GW and does not want the provisions on LCR to act as a constraint in reaching this goal. Therefore, there is an effort to design new schemes or tweak existing ones so as to provide the few remaining domestic manufacturers an assured market with public sector undertakings. There is a prevailing view that the domestic manufacturers won't be affected in the long term if they are able to secure market through government agencies.

Going forward, therefore, there is a consensus that India's solar policy will not contain a crude LCR provision as it has been recognised to be legally inconsistent with international trade rules and because they are not the most effective.¹⁵⁰ After the Panel Report, when it became clear that the LCR was not legally tenable under WTO rules, several solar manufacturers decided to change their business model from manufacturing to solar power generation. With the release of the Appellate Body Report, the manufacturing capabilities of most domestic manufacturers have taken a certain hit. Although WTO dispute was brought to ensure a level playing field, some believe the US inadvertently impacted its own commercial interests negatively as the Indian government will end up procuring more goods locally than was originally planned under the NSM.¹⁵¹

2. India's Solar Policy Pivot

In the backdrop of the *Indian Solar* dispute, the findings from this research study suggest that India demonstrated a solar policy pivot, both at the national and international level. In this section, we take a closer look at how India moved towards a clearer framing of its domestic solar policy and creating a new solar manufacturing landscape. In addition, this section explores India's growing role in global norm-building around solar energy through the ISA.

2.1 Policymaking at the National Level

As the *Indian Solar* dispute progressed, there was a clearer understanding of the WTO incompatibility of the LCR measures within the Indian policymaking circles. During the bilateral talks between Piyush Goyal and the USTR, one of the focal

¹⁴⁹ Interview #22, *supra* note 99.

¹⁵⁰ Interview #6, *supra* note 156; Interview #15, *supra* note 101; Interview #17, *supra* note 96; Interview #19, *supra* note 136.

¹⁵¹ Interview #6, *supra* note 156; Interview #15, *supra* note 101.

negotiating points was on the issue of treating the challenged LCR measure as government procurement. These consultations, however, did not lead to any settlement between the parties. After the adverse WTO ruling, India, on its part, began the effort of dismantling the LCR measure and finding two alternatives for domestic solar manufacturers: one of the ways is through government procurement for the defence and railway sectors; the second is by creating a demand-pull incentive in the domestic solar manufacturing sector through the 'Make in India' program, which allows up to 100% of foreign direct investment in the renewable energy sector. As one of the interviewees remarked:

“One of the major positives from the dispute is that the government understood the value of solar and started thinking of ways to absorb electricity from solar”.¹⁵²

Going forward, there is a consensus among the stakeholders that renewable energy, especially solar, is going to be the main plank of India's energy future. Since the launch of the NSM, India has ramped up its solar targets from 22 GW to 100 GW of solar power by 2022. In light of these ambitious goals, there appears to be a strong belief that India needs to continue its focus on creating a strong domestic manufacturing base in solar energy. This time, however, there is a better understanding on how to redesign policy in a WTO-consistent manner.

In order to move away from the prospect of importing all its clean energy equipment, the government appears inclined towards turning India into a \$100 billion market for clean energy through the 'Make in India' program. 'Make in India'— with its greater emphasis on innovative financing, low-cost loans, multilateral and bilateral finance negotiations— could work to create a demand-pull incentive, thus bringing in more players into the domestic manufacturing market. Moreover, it allows for 100% foreign direct investment in the solar energy sector, which creates a level playing field for foreign solar manufacturing companies. With this initiative, the government is attempting to create a competitive manufacturing environment and improve the ease of doing business in India.¹⁵³ One of the interviewees argued that 'Make in India' can complement the entire process of achieving solar targets in a WTO compliant way.¹⁵⁴ Another described how India is finally moving towards positioning itself as a market post the WTO decision, but that the “irony or tragedy of the situation is that (we)

¹⁵² Interview #5, *supra* note 98.

¹⁵³ Interview with a Senior Gov't Official, Dep't of Indus. Policy & Promotion, in New Delhi, India (Dec. 18, 2016) [hereinafter Interview #18].

¹⁵⁴ See Interview #9, *supra* note 105: “The WTO decision is not a blow to India's solar ambitions. It is a little bit of redirection, which says that your goal is okay, but just do it this way.”

became embroiled in a unnecessary dispute”.¹⁵⁵ As a senior government official puts it:

“The WTO dispute serves as a lesson for policymakers that it needs to find innovative measures to support and strengthen the domestic industry, which is definitely a need considering the scale of the (solar, emphasis added) targets.”¹⁵⁶

2.2 *India's Leadership Role in the ISA*

This section describes how India, in the backdrop of the Paris Agreement and its domestic solar targets, is attempting to chart new global norms for solar energy through the ISA. According to several interviewees, the Paris Agreement doesn't deal with renewable energy, particularly solar energy; consequently, the ISA is motivated by a desire to bring countries together in an effort to identify the kind of technologies as well as the research and development needed to push towards the deployment of solar energy globally. According to one interviewee, “the ISA could be used as a means of recalibration on part of developing countries to set rules.”¹⁵⁷ India, therefore, seems to have taken a leading role in the creation and operationalisation of the ISA: the idea of the ISA has the personal stamp of the Prime Minister of India and the headquarters of the new alliance will be in New Delhi, India.

In addition, India has vociferously argued for ISA to be a treaty-based international organisation. While the dispute role does not have a perceivable role in the creation of the ISA, it evidences a stronger commitment shown by India to take the lead on solar norm making. It is difficult to establish a correlation between India's leading role in the ISA and the solar trade dispute, but the findings suggest that India is trying to use the ISA's platform to take its ambitious domestic solar targets to a global level. As a result, a global partnership on a collaborative platform that includes “all the countries between the two tropics” could provide additional legitimacy to India's domestic goals. According to one interviewee:

“ISA is a way to find a global aggregation and convergence towards a global target for solar. Currently, India has domestic targets but we hope to extend it into the international arena.”¹⁵⁸

¹⁵⁵ Interview with Government Official, Min. of New & Renewable Energy, in New Delhi, India (Dec. 6, 2016) [hereinafter Interview #6].

¹⁵⁶ Interview #11, *supra* note 91.

¹⁵⁷ Interview #7, *supra* note 113.

¹⁵⁸ Interview #11, *supra* note 91.

There is, however, some scepticism over the role of ISA in creating global norms for solar energy; some believe that it was “promoted merely for optics at the Paris COP”¹⁵⁹, while some others raise questions over the “lack of a long-term vision in setting up India as a serious player in manufacturing technologies/capabilities”.¹⁶⁰ Although the main challenge for the ISA will be to sustain the initial momentum, it is most certainly India’s attempt at creating “soft” norms on exchange of technology and knowledge partnership in the solar energy sector.

In June 2017, India and the US informed the Dispute Settlement Body (DSB) of the WTO that they had agreed that the reasonable period of time to implement the DSB’s recommendations and ruling would be 14 months, which was set to expire on 14 December 2017.¹⁶¹ In a communication dated 14 December 2017, the delegation of India informed the DSB that “Indian authorities have held extensive internal stakeholder consultations since the adoption of the rulings and recommendations of the DSB to fully comply with them.”¹⁶² It further stated that “in compliance with the findings and recommendations of the DSB in this dispute, India has ceased to impose any measures as found inconsistent in the DSB’s findings and recommendations.”¹⁶³ The US, however, on 19 December 2017 requested authorisation to retaliate and suspend concessions with respect to India due to what it said was India’s failure to comply with the DSB’s rulings.¹⁶⁴ India, meanwhile, objected to the US request for authorisation to retaliate stating, “India stands severely prejudiced by the vagueness and opaqueness of the United States’ request.”¹⁶⁵ Other countries, such as the European Union, Canada, Brazil, China and Japan have supported India in the solar dispute on the grounds that the US request lacked legal basis for retaliation.¹⁶⁶ In light of these recent developments, the DSB has referred the matter to arbitration under Article 22.6 of the DSU.

While this dispute appears far from over and could pose severe challenges for future trade relations between the two countries, it offers important insights into

¹⁵⁹ Interview #8, *supra* note 104.

¹⁶⁰ Interview #6, *supra* note 155; Interview #3, *supra* note 109.

¹⁶¹ Status Report Regarding Implementation of the DSB Recommendations and Rulings by India, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc, WT/DS456/17 (Dec. 18, 2017).

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ Request to Article 22.2 of the DSU by the United States, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc, WT/DS456/18 (Dec. 20, 2017).

¹⁶⁵ Response to Article 22.6 of the DSU by India, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc, WT/DS456/19 (Jan. 8, 2018).

¹⁶⁶ D. Ravi Kanth, *WTO: Support grows for India in solar tiff with US*, LIVE MINT (Jan. 15, 2018), <http://www.livemint.com/Politics/mSx6CQUqgyY6Y3h4N0bDXM/WTO-Support-grows-for-India-in-solar-tiff-with-US.html>.

solar regulatory governance in India. A crucial lesson is on the issue of policymaking. At the national level, India appears to be moving from a situation of “unsure protectionism” to creating an open, market-based incentive structure around its broader domestic solar energy targets through ‘Make in India’. On the international front, India’s engagement with the ISA could be interpreted as a rewriting of global norms on solar energy with India poised to become a norm maker instead of a norm taker. The long-term success of both these solar policy pivots depends on whether India is able to sustain the momentum of ‘Make in India’ as well as ISA.

IV. CONCLUSION

One of the motivating questions for this study was how countries deal with the tensions between the international legal regimes for trade and climate change. In the backdrop of the *Indian Solar* dispute, how does India view the complicated relationship between the global trade and climate regimes in the solar energy sector? Does the WTO ruling in the *Indian Solar* dispute negatively affect India’s ambitious solar energy targets?

Several interviewees agreed that there was no incompatibility of norms between the international trade and climate change regimes. Rather, this dispute was a “reminder to think across regimes and disciplines to come up with a stable and robust policy”.¹⁶⁷ One interviewee referred to fragmentation as the “reality of our times” and said that each discipline would want to maintain its own integrity.¹⁶⁸ The WTO rules, according to another interviewee, are not impinging on India’s climate policymaking space. He noted:

“International obligations are meant regulate. No one is stopping you from pursuing these (climate) goals, you just can’t pursue these goals in a trade-restrictive manner. India’s regulatory space is not compromised, at least on this issue.”¹⁶⁹

However, the views across government officials showed significant variations. One viewpoint believed that energy policy is no longer in the government’s domain and influenced heavily by international pressures, including the WTO – on the one

¹⁶⁷ Interview #21, *supra* note 106.

¹⁶⁸ Interview with the Legal Adviser in the Min. of Ext. Affairs, in New Delhi, India (Dec. 16, 2016) [hereinafter Interview #16]: “Countries could opt to protect sovereign space either through bilateral consultations or multilateral initiatives. In that context, the International Solar Alliance could play an important role in how it shapes global rules and affect what the WTO has already decided.”

¹⁶⁹ Interview #9, *supra* note 105.

hand, the government can't deter from its Paris Agreement commitments aimed towards achieving a low carbon economy; while on the other, challenges before the WTO could constrain the country from achieving these objectives.¹⁷⁰ Another viewpoint suggested that India's climate obligations are in no way affected by the solar trade dispute.¹⁷¹ Yet another viewpoint expressed scepticism over the issue of climate change in this WTO dispute, noting that it emerged as a much later concern in this case: "a protectionist industrial policy can't be used to justify the climate change measures."¹⁷² Some interviewees noted that the US position of pursuing an "in principle" litigation against India's solar policy at the WTO, while at the same time wanting greater commitments from India under the Paris Agreement, reeked of "doublespeak".¹⁷³

Ultimately, at the domestic policymaking level it ended up being a case of one domain not knowing enough about the other, which perhaps weakened India's defence at the WTO. With no single ministry looking to join the dots, India ended up at the WTO with an indefensible case and on a difficult road of meeting its ambitious solar energy targets without any domestic manufacturing capability. As one interviewee put it, weak inter-ministerial coordination and the usurping of bilateral trade-related talks by the MNRE, led to a situation of "fragmentation of international law at the national level."¹⁷⁴

This case study illustrates a high level of institutional fragmentation and brings out the fraught relationship between the MoCI and the MNRE. In 2011-12, some policy think tanks highlighted the fact that certain provisions of the NSM were susceptible to a WTO dispute, which led to the initial inter-ministerial contact between the MoCI and the MNRE on this particular issue.

Following this, the two ministries held several inter-ministerial consultations on the WTO compatibility of the NSM provisions. The bottom-line was that the MNRE received several advises from the MoCI to not proceed with such a LCR policy. The MNRE instead continued with the LCR provisions, as a result of which there were two separate themes emerging from two different departments: First, the MoCI was looking at the issue from a technical perspective and in terms of ensuring compliance with WTO rules. They discouraged the MNRE from taking a confrontational stance on the issue, as one official recalls, "the whole approach of

¹⁷⁰ Interviews #5, *supra* note 98; Interview #19, *supra* note 136.

¹⁷¹ Interview with a Government Official, Ministry of Finance, in New Delhi, India (Dec. 5, 2016) [hereinafter, Interview #1]: "(the solar trade dispute is) only between two countries, so how should it matter for the Paris Agreement".

¹⁷² Interview #19, *supra* note 136.

¹⁷³ *Id.*; Interview #3, *supra* note 109.

¹⁷⁴ Interview #16, *supra* note 168.

India to take a confrontation on this issue, in my opinion, at that point was completely flawed. We were discouraging the MNRE from doing this all along.”¹⁷⁵ Second, the new government came with the objective of generation more power, which was backed by a manifold increase in India’s solar targets. The MoCI, however, was of the view that even if objective of the new government was to create more solar manufacturing capacity in the country, the LCR was a wrong objective to pursue as the Indian solar manufacturing industry was not cost-competitive. The official explains: “in our view, there was no point in contesting the American argument because you were bound to lose this case.”¹⁷⁶ The fact that the MoCI and the MNRE were at loggerheads on the issue of LCRs in the NSM is best summed up by an interviewee who said:

“It was a clear case where the government’s two wings are working at cross-purposes. One is driven by certain long-term technical and trade interests, and the other is driven by a notion that a large ambitious solar policy will necessarily generate domestic manufacturing.”¹⁷⁷

Ultimately, the discord between the two ministries went up to the level of the Prime Minister’s Office, where it was decided that India would face the dispute. The relationship between the two ministries appears to have further soured after the circulation of the Panel Report, when Mr. Piyush Goyal opened bilateral channels of communication with the USTR to settle the dispute. The lead on these discussions by Piyush Goyal was a clear departure from usual practice (where the MoCI represented India on all trade-related discussions), but could be explained by his proximity to the Prime Minister. At this point, the MoCI is said to have “washed its hands off the dispute” and started directing all questions on the dispute to “Mr. Goyal’s ministry that is dealing with it”.¹⁷⁸ Also, the MoCI did not want to assert its position at this stage as “no one had done any analysis in the Commerce Ministry”.¹⁷⁹

Several stakeholders point out that the MNRE’s efforts to contest and settle the dispute through bilateral talks with the USTR was not well thought through. As one interviewee said: “It was totally pointless and futile. They (the MNRE) could never give a cogent explanation on why they were so intent on fighting this case. I regret not putting it down on paper that this was an indefensible case.”¹⁸⁰

¹⁷⁵ Interview #10, *supra* note 102.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ Interview #9, *supra* note 105.

¹⁷⁹ Interview #7, *supra* note 113.

¹⁸⁰ *Id.*

In addition, this case study illustrates weak preparedness within the government for complicated international disputes. A recurring theme among several stakeholders was the need to build legal capacity to deal with complex issues of international law, especially ones that cut across different legal regimes and could have a bearing on domestic policymaking. Legal capacity becomes essential to translate the knowledge of whether a domestic policy is consistent with a country's international law obligations. In the context of the *Indian Solar* dispute, a legal expert noted:

“What is most important is the issue of lawyering and capacity building for public international law, and not necessarily trade law.”¹⁸¹

While the government has been trying to build internal capacity on legal issues of trade and WTO law,¹⁸² there is a clear absence of legal support within other ministries. Stakeholders involved closely with climate negotiations have highlighted the “need for creating institutional memory”,¹⁸³ as well as the “need for legal capacity during climate negotiations.”¹⁸⁴

Another key lesson from this case study is on the policymaking process in the Indian government. Given that the LCR policy was pushed on the back of one official in the MNRE who had a “tunnel vision”,¹⁸⁵ this case study illustrates the notion of ad-hoc bureaucratic decision-making without setting a broader strategy. Ultimately, it was in the face of an international dispute that the government realised the need for policy correction. As one interviewee puts it:

“The big lesson ... in all of these issues is the extent to which the government is forced to go into battle unprepared. Where is the

¹⁸¹ Interview #21, *supra* note 106.

¹⁸² The MoCI maintains a roster of 14 empaneled domestic law firms to represent India in WTO disputes. Some of these law firms are Clarus Law Associates (which represented India in the solar dispute), Lakshmikumaran & Sridharan, Luthra & Luthra Associates, Economic Laws Practice (involved in the counter challenged filed against the US).

¹⁸³ Interview #3: “We need some people who stay with these negotiations over time. It’s a huge learning curve for any new person (bureaucrat) that comes in. There should be a core group. I have memory today, but I am outside the system. Now there’s no time either – going from one crisis to another crisis.”

¹⁸⁴ Interview with Government Official, Ministry of Environment, Forests and Climate Change, in New Delhi, India (Dec. 14, 2016) [hereinafter, Interview #12]: “We feel the need for legal teams even in climate negotiations. Within the constraints that we have to work with – we pick up people from the MEA or try to bring in legal consultants. We try to the extent we can within the government system.”

¹⁸⁵ Interview #7, *supra* note 113.

analysis? I really get a sense that the institutional infrastructure for analysis, for reflection, for data just doesn't exist. There is a lot of ex-post scrambling. A lot of times, [policymaking] is a conjunction of factors that make things favorable – an enterprising bureaucrat pushed something through and not that it was actually a strategic decision. It was a strategic decision in the context of bureaucratic decision-making itself.”¹⁸⁶

Therefore, this case study concludes with three main takeaways on the domestic policymaking process in India, as illustrated through the lens of the solar trade dispute with the United States: First, domestic policies are designed in an ad-hoc manner without factoring in all data and analyses of international legal obligations. Second, domestic processes are not adequately prepared to respond to multiple challenges under the international trade and climate change regimes. Third, there is a need for building strong legal capacity for public international law in India, both to inform and to defend the domestic policymaking process, especially with the growing challenge of climate change governance.

¹⁸⁶ Interview #8, *supra* note 104.