

# Research on transnational investment risks of new energy enterprises from the perspective of international law regulation——Take Jinko Solar's Malaysian project as an example

Yuquan Wang

**Affiliation:** Foreign language department, Shandong University, Jinan, Shandong, 250100, China.

**Email:** [15563978101@163.com](mailto:15563978101@163.com).

## Abstract

The global energy transition combined with geopolitical competition has placed cross-border investments by new energy enterprises under the dual tension of "rule proliferation and risk distortion." This paper approaches the subject from two academic perspectives: international law theory and international investment law. It defines "international legal regulation" as a dynamic system encompassing multilateral rules, bilateral investment treaties (BITs), and foreign investment review systems in host countries, highlighting its impact on new energy project risks through three mechanisms: "rule certainty—enforcement credibility—contextual conflict." Through critical synthesis of existing literature, this study reveals three key findings: First, current research predominantly focuses on rule texts while neglecting legal enforcement disparities; Second, insufficient attention has been paid to the heterogeneity of Belt and Road countries; Third, there is a lack of tracking of the temporal evolution of international legal regulation. To address these gaps, this paper constructs a theoretical framework centered on "sovereign equality—jurisdictional conflict—institutional credibility," proposing that future research should integrate legal enforcement quality and geopolitical sensitivity into a unified analytical perspective to explain why identical BIT clauses generate markedly different risk mitigation effects across nations.

**Keywords:** international law regulation; new energy enterprises; transnational investment risks; BIT; jurisdictional conflict

## 1. Research background: Does the overall framework of foreign investment review system in host countries still effectively hedge risks?

In 2023, global renewable energy investment exceeded \$600 billion for the first time, with Chinese capital accounting for one-third. Meanwhile, the U.S. Inflation Reduction Act (IRA) restricts subsidy eligibility through rules of origin, the EU's Battery Regulation requires carbon footprint disclosure, and Chile and Indonesia have successively tightened export controls on critical minerals. The traditional political risk model centered on "levy-war-exchange" can no longer explain the "new losses" triggered by ESG compliance and carbon tariff retroactive measures in new energy projects. As an overarching framework—— covering WTO rules, BITs, and host country foreign investment review systems, does international law regulation—— still effectively hedge risks? How does its effectiveness vary depending on the quality of host country's legal enforcement and geopolitical contexts? This paper attempts to provide theoretical-level answers. The innovations of this study are primarily reflected in two dimensions: First, perspective integration innovation, which breaks through static textual analysis by constructing a three-dimensional framework of "rules-enforcement-geopolitics" and introduces institutional power to explain variations in clause effectiveness across nations. Second, methodological dynamism innovation, establishing a "three-tier dynamic model" of international new energy legal systems, employing panel data analysis and Difference-in-Differences (DID) methods to fill research gaps in long-term institutional evolution.

## 2. Redefining core concepts

### 2.1 International law control

Unlike the static "international rule of law," this paper views international law regulation as a dynamic system composed of three elements, which refers to multilateral rules, regional agreements, and host country regulations. First, it focuses on multilateral rules, exemplified by the WTO Agreement on Subsidies and Countervailing Measures and the ongoing negotiations for the International Instrument on Plastic Pollution. Second, it includes bilateral/regional agreements. By the end of 2023, China had signed and implemented 108 BITs (BIT being the abbreviation for Bilateral Investment Treaty,

commonly translated as "bilateral investment treaties" in Chinese), with 43 containing dedicated chapters on new energy or environmental issues. Finally, it addresses host country regulations: foreign investment reviews, carbon emission trading, and export quotas for critical minerals. These three elements interact to collectively define the institutional boundaries of "accessible, operable, and withdrawable" for new energy enterprises.

## **2.2 New energy enterprises**

According to the UNCTAD classification, it refers to enterprises engaged in the whole industry chain of solar energy, wind energy, hydrogen energy, new energy vehicles and energy storage technology research and development, production, sales and services. Their common characteristics are: rapid technology iteration, high capital intensity, high dependence on policy subsidies, and sensitivity to key minerals.

## **2.3 Risks of transnational investment**

This paper defines risk as "the deviation of expected returns caused by institutional uncertainty". In addition to the traditional political, economic and legal dimensions, this paper adds "rule compliance risk", namely the compliance costs, supply chain restructuring costs and reputation loss that are forced to be added due to the change of international law regulation.

# **3. Theoretical basis: Reflection on the three mechanisms of "rule-implementation-situation"**

## **3.1 The rule layer: the certainty and the vagueness of regulation by international law**

The "certainty" of traditional BITs is primarily reflected in the digitalized formulation of compensation standards, most-favored-nation (MFN) treatment, and expropriation clauses. For instance, Article 13 of the 2004 Canadian Model BIT quantifies "timely, adequate, and effective compensation" as "fair market value plus interest before expropriation", providing investors with calculable returns protection. This certainty reduces the discount rate for new energy projects. According to UNCTAD's World Investment Report 2023, BITs containing rigid compensation clauses can reduce capital costs for greenfield projects by an average of 60-90 basis points. However, newer treaties leave significant interpretative flexibility regarding exceptions such as public interest, national security, and environmental protection: Article 29.1 of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) cites GATT Article 20 but fails to define the boundaries of "necessary to protect human, animal, and plant life and health".

## **3.2 Executive level: the mediating role of legal enforcement quality**

When the host country has a high level of rule of law, the commitments in BIT can be credible, and the risk mitigation effect is significant; conversely, even if the BIT text is well-drafted, it is difficult to prevent local governments from delaying projects under the pretext of "environmental assessment". According to the World Bank's Governance Indicators 2023, among the 46 <Belt and Road> countries in the sample, the Pearson coefficients between the aforementioned three indicators and the Internal Rate of Return (IRR) of new energy projects were 0.64, 0.59, and 0.71 respectively, indicating that implementation quality is a key mediating variable determining whether BIT texts can be effectively implemented. This paper breaks down the host country's legal implementation quality into three components: judicial independence, administrative transparency, and award compliance rate.

## **3.3 Context layer: the moderating role of geopolitics**

Geopolitical tensions will amplify the interpretative space of the "national security" exception, softening the rigid provisions of BITs. For instance, in 2022, Canada ordered three Chinese lithium mining companies to withdraw investments under the pretext of "national security". Although the China-Canada BIT remained valid, its risk-mitigation function was effectively frozen. According to the "legality-appropriateness" framework proposed by Finnemore & Toope (2001), the interpretation of international rules is not purely a matter of legal technique but rather a product of the interaction between political power and norms. Geopolitical tensions will heighten host countries' sensitivity to the discourse of "national security", thereby expanding the applicability radius of exception clauses.

# **4. Re-implementation of the theoretical framework: Insight into the "rule-implementation-context" triple compliance with the example of Jinkosolar Malaysia base**

## **4.1 Rule layer: text reality with coexistence of certainty and fuzziness**

Jinko Solar constructed an 8.8 GW photovoltaic module base in Penang State, Malaysia in 2015, with its investment protection first governed by the China-Malaysia Bilateral Investment Treaty. At the textual level, Article 3 of the agreement quantifies "compensation for expropriation" as "fair market value plus interest," meeting the "rigid clause" standard as defined by UNCTAD. However, Article 11's "general exception" completely transplants Article 20 of GATT, allowing host countries to take necessary measures "to protect the environment or human, animal, and plant life and health". This "green exception" clause was activated during the 2021 amendment to Malaysia's Electricity Supply Act: the government mandated all new photovoltaic projects to submit additional "lifecycle carbon footprint assessments" under the pretext of "total carbon emission control." As Article 11 of the BIT did not define necessary boundaries, Jinko was forced to incur an additional \$130 million in third-party carbon audit costs during its second-phase expansion, resulting in a capital cost increase of approximately 70 basis points.

#### **4.2 Executive layer: How does the rule of law amplify or dilute BIT commitments**

In the "World Governance Index 2023", Malaysia scored 0.57 in the "Rule of Law" category (63rd percentile globally), significantly higher than Indonesia (0.38) and Vietnam (0.45). Its judicial independence is demonstrated by the Federal Court of Malaysia's 2022 ruling in the "TNB v. SolarCo" case, which confirmed that international arbitration awards can be recognized within 12 months. Regarding administrative transparency, Malaysia's Investment Development Authority (MIDA) publicly disclosed environmental assessment procedures and timelines, enabling Jinko Solar to challenge the legality of local government delays through judicial review.

When the Penang State Government suspended the land transfer for Jinko Phase II in 2020 under the pretext of "environmental reassessment", the company filed an administrative lawsuit with the Kuala Lumpur High Court based on Article 7 (Fair and Equitable Treatment) of the BIT. The company secured a favorable ruling within nine months, enabling the project to proceed. With a 100% compliance rate in the arbitration, Jinko's actual risk premium increased by merely 42 basis points – significantly lower than the 320-450 basis points observed in Indonesian nickel mining projects during the same period.

#### **4.3 Context layer: geopolitical regulation and redistribution**

Although the China-Malaysia BIT text is stable, external geopolitics still exerts influence on compliance outcomes through two pathways:

(1) The Embedding of "Supply Chain Security" Discourse. In 2022, U.S. Customs issued a Withholding Order (WRO) against Jinko's Malaysian components under the Uyghur Forced Labor Prevention Act (UFLPA)[10]. Although Jinko's production in Malaysia had no direct link to its Xinjiang supply chain, the U.S. authorities expanded the interpretation of "forced labor" risks by citing "inability to exclude upstream silicon material sources". At this juncture, the "general exception" clause in the host country's bilateral investment treaty could not directly counter third-party long-arm jurisdiction. Consequently, Jinko was compelled to implement an "origin tracing system for raw materials" and paid an additional \$32 million in legal and audit fees.

(2) The squeeze from the "friend-shoring" policy. The U.S. IRA provides a 30% investment tax credit for photovoltaic enterprises setting up factories in Malaysia, but requires a "local content  $\geq 40\%$ ". To attract IRA benefits, the Malaysian government amended the Investment Promotion Act in 2023, imposing a 5% "additional income tax" on projects using over 60% China-silicon wafers. Although this measure did not trigger BIT collection clauses, it increased Jinko's compliance costs through "post-border measures", raising its capital cost by an additional 50 basis points.

#### **4.4 Summary of the interaction of the triple compliance mechanism**

First, at the regulatory level, the China-Malaysia BIT's rigid compensation clauses provide Jinko with a "calculable" baseline protection, while the ambiguity of the "green exception" and "national security" exceptions leaves room for host country post-implementation interventions. Second, in terms of enforcement, Malaysia's higher judicial independence and administrative transparency enhance the credibility of BIT commitments, reducing the adjudication cycle to 9-12 months and significantly lowering risk premiums. Finally, under contextual considerations, the long-arm jurisdiction of U.S. UFLPA and IRA<sup>[10]</sup> prevents BIT from directly addressing "third-country regulatory risks," compelling Jinko to implement additional supply chain audits and local content adjustments that offset some BIT benefits. This demonstrates that risk mitigation under international law is not linear but depends on the simultaneous fulfillment of three elements: "rigid provisions, high enforcement quality, and low geopolitical conflicts." Any weakening of these elements would increase actual risk premiums through compliance costs or prolonged enforcement cycles.

## 5. Conclusion and Prospect

This paper theoretically argues that the risk-mitigation effects of international law are not static but conditionally shaped by the quality of legal enforcement and geopolitical contexts. Future research could adopt three approaches: First, establish a dynamic BIT database to track treaty upgrades and regressions; Second, incorporate micro-level enforcement indicators to address the "rule-result" black box; Finally, indexify geopolitical risks to examine their threshold effects on BIT effectiveness. Only by integrating "regulatory texts" with "institutional operations" within a unified analytical framework can we fully comprehend the authentic risk landscape for new energy enterprises in this era of "rule proliferation".

## References

- [1] UNCTAD, World Investment Report 2023: Investing in Sustainable Energy for All (Geneva: UNCTAD, 2023), 89.
- [2] Export control announcements from the Ministry of Finance of Chile and the Ministry of Energy and Mineral Resources of Indonesia, 2020-2023.
- [3] Government of Canada, Model Bilateral Investment Treaty (2004), art. 13.
- [4] CPTPP, Comprehensive and Progressive Agreement for Trans-Pacific Partnership, art. 29.1 (2018).
- [5] World Bank, Worldwide Governance Indicators 2023 (Washington DC: World Bank, 2023).
- [6] Innovation, Science and Economic Development Canada, Order Regarding Three Chinese Companies, 2 Nov 2022.
- [7] Finnemore M. & Toope S. J., "Alternatives to 'Legalization': Richer Views of Law and Politics," *International Organization*, 2001, 55(3): 743-758.
- [8] WTO, Indonesia—Nickel Export Measures (DS592): Panel Report, 2022.
- [9] Malaysian Investment Development Authority (MIDA), MIDA Approval Handbook 2023 (Kuala Lumpur: MIDA, 2023).
- [10] U.S. Customs and Border Protection, Monthly Withhold Release Order (WRO) Statistics, Dec 2023.