

## Navigating the Attarat Power Plant Project Between Jordan and China: A Win-Win Approach

BUTHAINA ZAWAHRAH & GEETHA GOVINDASAMY\*

*Department of East Asian Studies, Faculty of Arts and Social Sciences,  
Universiti Malaya, 50603 Kuala Lumpur, Malaysia*

Corresponding author: [geethag@um.edu.my](mailto:geethag@um.edu.my)

Received: 23 May 2025      Accepted: 19 October 2025

### Abstract

This study examines the Attarat Power Plant project involving both Jordan and China. It analyzes to what extent the project is a “win-win” for both parties. At the same time, it examines how external factors, such as American influence in Jordan has the potential to impact the project’s success because of the idea of Chinese ‘debt trap diplomacy’ in Jordan. Hence, it illustrates the complications of China’s Belt and Road Initiative (BRI) expansion in regions where the United States’ interests are prominent. The research employs a qualitative approach, drawing from academic literature, media sources, and expert opinions. Primary and secondary sources were analyzed to assess the project’s development, benefits, and obstacles. The study finds that the Attarat project represents a solution for Jordan’s energy security. It also aligns with the broader vision of the BRI in enhancing connectivity and creating a mutually prosperous future, making it a win-win solution for both parties. Despite this, the project has faced challenges; particularly in the form of arbitration due to price dispute of electricity, influenced by the U.S.-China rivalry. While the arbitration has been dismissed by the International Chamber of Commerce (ICC), challenges do exist in the energy sector because of the existence of differing interests concerning major power interventions in Jordanian economic development.

**Keywords:** Attarat Power Plant Project; Belt and Road Initiative; Jordan-China Relations; Win-Win Approach; Arbitration Process

### Introduction

The Attarat Power Plant project, hereafter known as Attarat project, is the largest foreign investment in Jordan’s history and the world’s biggest private-led energy venture.<sup>1</sup> More importantly, Jordan possesses enormous deposits of high-quality oil shale.<sup>2</sup> Oil shale is sedimentary rocks that contains a solid organic material called kerogen, “that can be converted into shale oil and combustible gas through heating”,<sup>3</sup> which eventually generates electricity. The Attarat project uses the ‘direct burning’ technology,<sup>4</sup> which is the most common way of operating and utilizing oil shale. This technology involves combusting the raw oil shale rock directly in a furnace or boiler to produce heat, typically for power generation or industrial processes. This method utilizes oil shale as a fuel source, similar to coal, by burning it to release thermal energy. The heat generated can then be used for various applications, such as electricity production or providing process heat for other industrial activities.<sup>5</sup> At the moment, the Attarat project is fully operational. It is important for Jordan because it addresses the country’s need for a local energy source to alleviate the growing energy demand and garner more foreign investments. For China, the project provides it with a foothold in Jordan and enhances its position in the Middle East region, as well as acquiring lucrative energy projects and contracts. However, the

project also could lead to increased Chinese influence in the region.<sup>6</sup>

In 2015, Jordan signed a strategic partnership with Beijing to join the Belt and Road initiative (BRI), which accelerated Chinese investments into the country.<sup>7</sup> Investments under the BRI encompassed various sectors, including roads, railways, electricity, communications, gas and oil pipelines, nuclear energy, oil shale, and renewable energy projects. Jordan is a vital transit center that has the capacity not only to link but expand electricity, gas, and oil networks in the Middle East region.<sup>8</sup>

The BRI is formally built upon the principle of win-win approach, which emphasizes extensive consultation, joint contribution, and shared benefits among participating countries regardless of size or ideology.<sup>9</sup> Beijing frames the BRI as a collaborative platform that advances mutual prosperity and inclusive development, with China offering infrastructure financing, technology transfer, and market access while host countries receive sustainable growth, poverty reduction, and improved connectivity.<sup>10</sup> The BRI operates on the basis of equal partnership and shared gains, challenging zero-sum thinking and promoting a community with a shared future for humanity.<sup>11</sup> These principles reflect China's broader diplomatic paradigm of a new type of international relations, based on mutual respect, non-interference, and win-win outcomes.<sup>12</sup> As the BRI enables developing countries to access capital and technology efficiently while allowing China to deploy its global infrastructure capacity—thus reinforcing China's international role while delivering tangible development to its partners, which ultimately carries win-win outcomes for all parties.<sup>13</sup>

As the Attarat project represents a prominent BRI project, this article argues that China successfully managed it as a win-win case within its broader BRI framework, achieving project goals despite pricing disputes raised by Jordan, largely due to the state's strategic geopolitical location, which offers China valuable access to the Middle East, enhances regional connectivity, and facilitates the expansion of mutual interests. In light of this, China became interested in investing in Jordan, and thus far has made significant investments in its energy sector through the Attarat project.<sup>14</sup> However, as the project faced some challenges, the article seeks to highlight that it remains a win-win for both Jordan and China.

This paper is divided into several sections. First, it introduces the Attarat Power Plant project, followed by a brief literature review on role of the project in Jordan-China relations, the challenges to the project and its associated debts, and the influence of the United States (U.S.) on Jordanian politics. Third, the methodology for the article is explained. Fourth, the development of the Attarat project and the benefits it offers Jordan is examined. Fifth, the win-win approach, where the main argument of the article is explained. The sixth section explicates the challenges and difficulties facing the project. Seventh is the analysis on how the win-win discourse applies to the Attarat project. This is followed by conclusion in the eighth section.

## **Literature Review**

The literature review is structured around three key themes: the role of the Attarat project in Jordan-China relations, the challenges to the project and its associated debts, and the influence of the U.S. on Jordanian politics, which is believed to have impacted the project.

Firstly, Davis considers that the significance of the Attarat project should be viewed within the broader context of Jordan-China strategic relations, highlighting the project as the largest BRI private investment outside China.<sup>15</sup> Likewise, Debre examined the Attarat project as the largest private enterprise among BRI projects outside China. To her, it is a pivotal initiative designed to provide Jordan with a substantial energy source while deepening its strategic ties with China.<sup>16</sup> Moreover, China views Jordan as a gateway to the Levant region as Xinhua posted.<sup>17</sup> Marks underscores Jordan's

importance to China, which extends beyond economic interests to include regional development, humanitarian concerns, international security, and post-conflict reconstruction.<sup>18</sup> Within the Jordan-China partnership, Al Adwan highlighted the importance of the BRI for Jordan by emphasizing the potential of the Attarat Power Plant Project, noting that in its early stages, it was regarded as a promising venture for both Jordan and China.<sup>19</sup>

Secondly, in terms of associated debts, while Davis acknowledged the importance of the Attarat project, she ultimately concluded it as a failed project. Consequently, she speculated that Jordan might seek support from the U.S. and Europe to offset the shortcomings of Chinese investments.<sup>20</sup> Similarly, Marks argued that strategic miscalculations in bilateral relations contributed to the project's failure. He viewed this failure as a valuable case study for assessing the implementation of the BRI in Jordan and other middle-income countries.<sup>21</sup> This perspective aligns with Debre's analysis, which recognized the power plant as a failure that has adversely affected Jordan-China relations.<sup>22</sup> Davis noted that while China's BRI has achieved success in neighboring countries, Jordan remains an exception. Debre and Davis posited that Jordan was already caught in a debt trap because of China's financial approach to the Attarat project. The debt trap refers to China's excessive lending to poor and low-income states. Usually, these states are not able to repay the debt, in which they end up relinquishing one or more of their strategic assets to China to cover the debts.<sup>23</sup> Seen from a different context, Marks highlighted the issue of foreign aid, drawing a comparison between Chinese and American aid strategies.<sup>24</sup> He emphasized the stark differences between the two, particularly in terms of their expectations regarding project implementation and delivery. He further argued that the Attarat project will remain a source of friction between Jordan and China, reinforcing criticism of BRI projects by like-minded Western observers who perceive them as a significant 'debt trap'. Not only westerners but scholars like Abu Yahia also characterized the Attarat project as a debt trap. She asserted that debt trap was the primary motivation behind the Jordanian government's decision to pursue arbitration against the Attarat Power Company (APCO), citing blatant unfairness in terms of pricing.<sup>25</sup>

Thirdly, the influence of the U.S. on Jordanian politics needs to be understood. Within this scope, Abu Yahia acknowledged the significant role of the U.S. influence in Jordan's political decisions.<sup>26</sup> Given the long-standing relationship between the U.S. and Jordan, Abu Yahia argued that American pressure to curb China's influence in the country is a key factor. Unlike other scholars, she questioned Jordan's ability to continue its engagement with BRI projects amid the ongoing U.S.-China rivalry. Within this backdrop, Debre observed that in Jordan and other economically struggling Arab states allied with the U.S., Chinese investments have declined in recent years, attributing to anti-China sentiment.<sup>27</sup> Moreover, Debre noted that U.S. officials framed the Attarat agreement as an example of Beijing's "debt trap diplomacy." She quoted what was said by the former U.S. assistant secretary of state for Middle East policy, David Schenker (2019-2021), who expressed his concerns about China's transparency, corruption, and democratic processes which comes along with authoritarian states. Likewise, Davis quoted Dr. Amer Sabaileh, a Jordanian scholar, who asserted that the issues surrounding the Attarat project have political undertones. Davis thinks that the U.S.-China rivalry is a factor that is impacting Jordan-China relations and BRI investments in the country.<sup>28</sup> In similar vein, Marks questioned the strength of the political relationship between Jordan and the U.S., suggesting that it is likely to limit long-term ties with significant rivals such as China.<sup>29</sup> Furthermore, Zawati highlighted that Jordanian officials like Dr. Maher Hijazin, Director General of the Natural Resources Authority, seeking arbitration was a result of American influence and pressure on Jordan within the broader context of the U.S.-China rivalry.<sup>30</sup>

Previous studies on the Attarat project have largely focused on its perceived shortcomings, often portraying it as a failed initiative. In contrast, this research adopts a win-win perspective, emphasizing the mutual benefits for both Jordan and China within the larger context of BRI in the

## Methodology

This research employs a qualitative method. The qualitative approach allows for a thorough, in-depth examination of the project's potential for development and its broader geopolitical and economic implications.<sup>31</sup> The research's core purpose is exploring the win-win approach, which necessitates detailed exploration and analysis of Jordan-China relations, which is best conducted using a qualitative method. The article employed both primary and secondary sources. Secondary data was collected from various print and online media sources from Jordan and China. Primary sources were obtained from semi-structured interviews and official websites of APCO, Enefit, YTLPI, Guangdong Energy Group Co., Ltd, and the BRI. These sources are from Jordan, Estonia, Malaysia as well as China. Interviews with two Jordanian individuals, well versed with the project, took place in March 2025 in Amman, Jordan. The two Jordanians were Wafaa Al-Saket, Advisor of International Cooperation Office & Supervisor of Asian Relations Division at the Ministry of Planning and International Cooperation and Nader Shahrouri, General Manager and Shareholder in Seven Seas Logistics Company, a business man who has direct involvement with the Attarat project as his company is in charge of logistics and shipping of the machineries from China to Jordan. A third interview was conducted in April 2025 with a Chinese diplomat who requested to remain anonymous.

## Development of the Attarat Power Plant Project

Jordan's vulnerable geographic location and ongoing economic crisis highlights the need to secure energy supplies to ensure social and political stability. More than 90% of Jordan's energy needs are imported from neighboring countries.<sup>32</sup> The country's energy strategy also had to encounter the potential risks of supply disruptions due to terrorist attacks, asserting the need for generating local energy sources. Faced with such circumstances, the Attarat project began to take shape to reduce the country's dependency on imported oil products for power generation by leveraging the local substantial oil shale resources.<sup>33</sup>

In 2006, APCO was first established by a private Jordanian firm named 'Near East Investment (NEI)', which was the main developer of oil shale in Jordan.<sup>34</sup> The project was very big and needed huge financial inputs, which led the Jordanian Council of Ministers to reach out to Estonia because it is the sole global owner of the technology of generating electricity from oil shale through the direct burning technology.<sup>35</sup> Hence, a memorandum of cooperation was signed between the Jordanians and the Estonians to study the feasibility of the project, which made the Estonian company 'Eesti Energia' a shareholder in the company. Later, on December 13, 2010, NEI and 'Eesti Energia' signed an agreement with the Malaysian 'YTL Power International (YTLPI)', and the company was named 'Enefit Jordan' at the time.<sup>36</sup> On October 1, 2014, Jordan's National Electric Power Company (NEPCO) signed a 40-year power purchase agreement with the consortium of the three companies which was included into APCO. The project aimed to build an oil shale-fired power plant in a town called Attarat um Ghudran.<sup>37</sup> The feasibility study estimated the project's cost at around \$2.2 billion.<sup>38</sup> As it was considered a high-risk investment, the Estonians and Jordanians made several attempts to secure financing from local as well as foreign sources from Europe, America, the Arabian Gulf countries, Japan, and Korea, but all attempts were unsuccessful.<sup>39</sup> As a result, both the Estonians and Jordanians turned to China for financial support. The Chinese agreed to financing with the condition the project will include a Chinese partner. More importantly, they wanted to manufacture the project's components in China, based on European standards.<sup>40</sup>

Additionally, APCO signed a financing and equity agreement with the Chinese partner in 2016, with the understanding that four Chinese banks will provide loans to the three shareholders.<sup>41</sup> This positioned China as a primary owner and major shareholder of APCO, given that it was the only financer of the project. As a result, APCO divided the shares as follows: Guangdong Energy Group Co. Ltd (China) with 45%, Eesti Energia (Estonia) with 10%, YTL Power International (Malaysia) with 45%, while NEI (Jordan) withdrew from the consortium.<sup>42</sup> The agreement between APCO and NEPCO outlined plans for a 470-megawatt capacity power plant designed to supply 15% of the country's electricity needs.<sup>43</sup> Additionally, on March 16, 2017, APCO officially announced the commencement of construction for a \$2.1 billion, 554 MW gross/470 MW net oil shale-fired mine mouth power station, with operations scheduled to begin in mid-2020.<sup>44</sup> Since then, APCO began selling electricity to NEPCO.

### **Win-Win Approach**

As the global economy becomes increasingly interconnected, nations and economies are growing more interdependent. As the Attarat Power Plant is perceived a win-win project in this research, it is necessary to clarify the win-win approach, which stands in contrast to the zero-sum approach, both of which originate from game theory. In a zero-sum game, one party's gain comes at the expense of the other's loss. However, in a win-win scenario, both sides can achieve mutually beneficial outcomes. The main characteristics of the win-win approach is that nations work together for shared prosperity, and to balance moral obligations with national interests, as well as respect and treat one another as equals. Key aspects of this approach include domestic reforms, addressing global economic challenges, attracting foreign investments, and ensuring financial and energy stability as part of its long-term development plan.<sup>45</sup>

### ***New Chinese Version of Global Governance***

While the principles of equality and mutual benefits are gaining prominence, winner-takes-all dynamics are increasingly seen as unacceptable. Within this framework, Wang Yi, Minister of Foreign Affairs of the People's Republic of China, stated that the goal of establishing a new model of international relations based on win-win cooperation reflects China's diplomatic heritage. He added that it also aligns with the United Nations (UN) Charter's principles of international cooperation, sovereign equality, peaceful dispute resolution, and resonates with contemporary global trends.<sup>46</sup> As the global economy becomes increasingly interconnected, interdependent is enhanced among nations, making cooperation more essential. In this context, China's international relations strategy, rooted in win-win cooperation, encourages countries to work together in pursuit of common interests.<sup>47</sup> This perspective positions shared interests as fundamental to global governance, a principle that China actively advocates in opposition to the Western win-lose paradigm. With the Attarat project, Chinese soft power and strategic presence in Jordan increased as the project represents a symbolic assertion of China's involvement in the Middle East energy infrastructure, offering an alternative development model to Western conditionality.

### ***Shared Prosperity and Joint Development***

In terms of promoting mutual prosperity and development, the Attarat project is a win-win project as it benefits a small nation like Jordan in the energy field and allows it to diversify its energy sources. It localizes the direct burning technology, a new and pioneering innovation globally, within

Jordan, and develops qualified local personnel capable of managing such a plant. Additionally, it contributes to the stability of electricity prices generated in the country, regardless of the globally volatile prices of fossil fuel sources.<sup>48</sup> This is very important aspect for planning future economic projects. Moreover, the project has created direct job opportunities, and other indirect openings for local citizens, which helped improve their lives.<sup>49</sup> As for China, the Attarat project provides strategic foreign investment, financing leadership, as well as international expansion of Chinese energy firms, demonstrating their capability in complex infrastructure financing. This enhances their global reputation in delivering BRI megaprojects. In sum, the project represents a shared prosperity, where Chinese investment advances Jordan's national interests. Simultaneously, Jordan enables China to extend its global economic leadership and influence, which reflects a win-win for both countries.<sup>50</sup> In this context, Nader Shahroui, General Manager, co-founder, and shareholder of Seven Seas Logistics, the largest Jordanian company facilitating trade and shipping between Jordan and China, emphasizes the significant role China has granted Jordan in its efforts to strengthen bilateral ties. Shahroui highlighted Jordan's invitation to the second edition of the China International Import Expo (CIIE), where it participated as a 'main guest of honor country' among 13 guest countries of honor. This designation provided Jordan with additional privileges compared to other participating nations. Thus, being selected as a 'main guest of honor country' among 200 participating nations underscores Jordan's esteemed position in China's strategic vision and reflects the importance Beijing places on its relationship with Amman as well as reflecting China's soft power.<sup>51</sup>

### **Challenges in The Attarat Project**

Before discussing the benefits gained by both Jordan and China in the Attarat project, it is pertinent to discuss the challenges faced by the project from within and outside of Jordan. The two main challenges associated with the Attarat project were the arbitration tribunal and foreign intervention. The project became increasingly complex due to pricing dispute between NEPCO and APCO. NEPCO began purchasing electricity from APCO in mid-2020, but concerns arose over pricing unfairness. Jordan pays JD 200 million (\$280 million) annually for electricity from APCO,<sup>52</sup> which was perceived as high. Electricity pricing fluctuates due to factors such as the debt-to-cost ratio (which measures the proportion of the project's total cost financed through debt), plant lifespan (40 years), and depreciation. As for depreciation, typically, power plants have higher electricity rates in their early years, which decrease over time. NEPCO's 2020 annual report revealed that electricity from other local renewable energy suppliers were priced higher than APCO's price.<sup>53</sup> Yet, despite Attarat's lower rate, the government challenged its pricing model due to concerns over long-term financial obligations, debt repayment, and perceived discrepancies in contract terms.

#### *Arbitration*

Jordan attempted to renegotiate the terms with APCO, seeking lower electricity prices or reduced interest rates on loans related to the project. Yet, APCO rejected the move, arguing that its loan agreement with the four Chinese banks was structured around an internal rate of return (IRR) of 17%, which corresponds to a tariff of \$0.17 per kWh. The company argued that any reduction in either the IRR or the tariff would jeopardize its ability to meet its debt obligations.<sup>54</sup>

This refusal underscored the dispute's complexity, as Jordan's government perceived the terms as unfair, while APCO defended its pricing based on market comparisons. As the conflict escalated, Jordan decided to resort to the International Chamber of Commerce (ICC) in Paris to solve the dispute. Additionally, NEPCO, which is representing the Government of Jordan (GOJ), initiated

international arbitration against APCO on December 19, 2020, marking a pivotal step in the dispute over the Power Purchase Agreement (PPA) and the government's guarantee of NEPCO's payment obligations.

The GOJ and NEPCO sought a ruling to challenge the \$0.17 per kWh tariff, arguing it was "grossly unfair" and requesting the right to terminate the PPA if the issue remained unresolved. Additionally, critics raised concerns regarding the government's decision, warning that it could discourage future foreign investments, and negatively affect Jordan's economic and diplomatic relations, particularly with China. Hence, former parliamentary energy committee member Musa Hantash pointed to corruption and mismanagement as underlying issues, suggesting that the dispute had created an unfavorable investment climate.<sup>55</sup> He added that, "it's very difficult to convince these big companies to invest in Jordan. There are things to help certain people make a profit."<sup>56</sup> Moreover, Economist Amer Shobaki expressed skepticism, stating that arbitration was unlikely to yield favorable results and that maintaining the project was more beneficial for Jordan's energy security. Furthermore, prominent attorney Zaid Nabulsi dismissed the claim of "grave deception," arguing that the government knowingly signed the agreement.<sup>57</sup> Despite these concerns, Jordan's Ministry of Energy and NEPCO have remained silent, further fuelling public skepticism about the government's handling of the project.<sup>58</sup> Despite legal counsel advising against arbitration due to its weak prospects, the Jordanian government did not concede and proceeded with the case.

Meanwhile, APCO defended the pricing rate, citing financial obligations in agreements with major Chinese banks such as ICBC, China Eximbank, Bank of China, and China Construction Bank. APCO warned that reducing the tariff would jeopardize its ability to repay loans to the Chinese banks, leading to severe financial repercussions. As Jordan requested a 36% price reduction, APCO rejected this proposal, stating it would undermine the project's financial viability.

However, after assessing the pricing unfairness claims, the ICC dismissed the arbitration case between NEPCO and APCO in August 6, 2024, concluding that there was no evidence of 'gross unfairness' on the part of APCO. Additionally, the agreement proceeded according to the prior arrangement between the two parties in accordance with applicable Jordanian laws and regulations.<sup>59</sup> What the arbitration case informs us is that within Jordan itself, there are those who are sceptical of Chinese investments and its intentions in the country. It can be argued that the primary obstacle to the Attarat project, is the contestation of Jordan's economic interests with China and the country's subservience to the American influence in the region.

### ***U.S.-China rivalry***

The Jordanian government's decision to pursue arbitration over the Attarat project, despite advice from experts, reflects the considerable impact of external factors, particularly U.S. pressure as stated by Dr. Maher Hijazin, Director General of the Natural Resources Authority. Hijazin asserted that external pressures, particularly from the U.S., played a role in Jordan's decision to pursue arbitration. He linked the decision to the broader U.S.-China rivalry, noting that China's involvement in the Attarat project heightened geopolitical concerns. Hijazin warned that the arbitration could have severe financial consequences for Jordan, as the government risked incurring significant legal costs without a strong case.<sup>60</sup> Moreover, Member of Parliament Saleh Al-Armouti claimed that the government was exploiting the dispute to shift public perception towards portraying the Attarat project as a financial burden, despite its strategic benefits, to align with U.S. directives.<sup>61</sup>

Showing the Attarat project as a burden and seeking arbitration can be interpreted as part of a broader geopolitical strategy driven by the U.S. desire to limit China's expanding influence in the region. The Attarat project, which relies on Chinese funding and foreign technologies, poses a

direct challenge to U.S. interests by enhancing Jordan's energy independence and reducing reliance on imported energy sources, primarily secured through U.S.-backed agreements such as the Israeli gas agreement, which was approved by the Jordanian government despite bypassing parliamentary consultation. Parliament member Saleh Al-Armouti, viewed the Israeli gas deal as a manifestation of external pressures, particularly from the U.S., aimed at undermining Jordan's engagement with China through the Attarat power plant project.<sup>62</sup> What this indicates is that there are officials in Jordan who sided with the Americans and others who backed China.

APCO's board member, Mohammed Maaitah dismissed Jordan's claims of gross injustice, accusing the country of withdrawing from its agreement in response to rising anti-China sentiment.<sup>63</sup> In this context, a Chinese diplomat who wants to remain anonymous remarked, "we are aware of the U.S. influence on Jordan, and we will not let this undermine our engagement with this country." When asked what will China do to overcome such challenges, he answered, "we have our own ways depending on the situation and the matter",<sup>64</sup> which reflected China's determination to maintain its presence and investments in Jordan. At the governmental level, while the Chinese Foreign Ministry rejected these allegations about Jordan, emphasizing that China does not force countries to borrow from it. The ministry said that China never attaches political strings to their deals or loan agreements, suggesting that Jordan seek relief through international financial institutions instead of asking APCO to reduce the price during the arbitration.<sup>65</sup> Moreover, when asked about the term 'debt-trap' during a press conference in Kenya, the Chinese Foreign Minister, Wang Yi, emphasized: it "is not a fact, but a malicious hype-up by some people" refuting any attempt of China to apply such methods.<sup>66</sup> This reflects China's perspective to the allegations of 'debt-trap diplomacy' frequently advanced by some countries regarding its implementation of the BRI.

Jordan's position within the U.S.-China rivalry is precarious. U.S. influence appears increasingly dominant, particularly in security and economic matters. This dynamic has complicated Jordan's hedging strategy, as American pressure often complicates its efforts to maintain an independent stance. The U.S. focus on curbing China's influence in regions with traditional allies like Jordan suggests that the push for arbitration over the Attarat project was part of a broader strategy to limit Chinese involvement. Such involvement could have significant long-term geopolitical implications for the U.S., which views China's expanding presence through initiatives like the BRI as a challenge to its global influence.<sup>67</sup> Moreover, the U.S. prioritization of its strategic interests, often at the expense of Jordan's national priorities, illustrates the considerable leverage Washington holds over its allies.

Bearing in mind the strong relations between Jordan and the U.S., the latter has long been Jordan's largest aid provider,<sup>68</sup> granting it significant influence over the country's decisions. While there is no explicit evidence of U.S. coercion in Jordan's decision to seek arbitration, the fact that the U.S. is engaged in Jordan's renewable energy sector and in financing energy segments is a factor that needs to be considered. The early to mid-2010s marked a turning point when energy investments in Jordan gained strategic prominence for the U.S.<sup>69</sup> The first major investment which the U.S. took part of was the Maan Solar Power Plant, which was developed by SunEdison Inc., a U.S. renewable-energy company, and started operating in 2016.<sup>70</sup> The project is the largest solar power project in Jordan.<sup>71</sup> Moreover, the USAID signed a memorandum of understanding with the Ministry of Energy and Mineral Resources (MEMR) in 2022 to provide \$40 million fund which was divided in 5 years,<sup>72</sup> demonstrating the U.S.' significant interest in investing in the energy sector.

However, the U.S. major engagement was through funds, aid and technical assistance.<sup>73</sup> Interestingly, the Chinese has already started investing in the Jordanian energy sector in the early 2010s.<sup>74</sup> Yet, after signing the strategic partnership with China which included the Jordanian decision to join the BRI, the U.S. sought more options to intensify its presence in Jordan's energy field. The intensifying U.S.-China rivalry poses significant challenges to Jordan's engagement with the

BRI, introducing geopolitical and economic risks that undermine the country's strategic balance. Chinese investments in Jordan, while economically appealing, are embedded within broader regional infrastructure projects that may exacerbate geopolitical tensions, particularly given the U.S. perception of such projects as tools of Chinese influence that threaten regional stability.<sup>75</sup> Such a dynamic raises concerns in an already fragile and conflict-prone regional context, including ongoing conflicts in Syria and the Israeli-Palestinian territories. Furthermore, Jordan's growing alignment with Chinese-led initiatives risks straining its longstanding diplomatic and strategic ties with the U.S., potentially complicating its regional diplomacy and strategic positioning.<sup>76</sup> Economically, deepening reliance on Chinese infrastructure and financing could create asymmetric dependencies, narrowing Jordan's policy autonomy and exposing it to vulnerabilities if Chinese investments decline or geopolitical tensions escalate. Together, these factors highlight the complex and often adverse implications of U.S.- China competition on Jordan, which offers broader insights into how great power competition affects smaller states engaged in development partnerships.

## Analysis

### *Benefits of the Attarat Project for Jordan*

For Jordan's energy security, there are several advantages that align with national energy policy goals related with the Attarat project. The project addresses energy diversification and import substitution, two critical pillars of energy resilience for resource-constrained states. In the near future, the project will supply 80 million cubic feet of gas per day, further contributing to reducing Jordan's gas imports by roughly 23%.<sup>77</sup> Consequently, the project enhances energy sovereignty, mitigating vulnerabilities linked to external supply disruptions and geopolitical pressures. The emphasis of stable pricing, with only a 3% fluctuation over the contract duration, indicates improved price predictability, which is vital for long-term economic planning and fiscal management.<sup>78</sup> Furthermore, as Jordan currently consumes about 350 million cubic feet of gas daily to run its power stations, annual savings of \$200 million, aligned with running the project, reinforces the project's value proposition not only in terms of energy supply but also in easing Jordan's balance of payments.<sup>79</sup>

Along with energy security, the Attarat project conveys a socio-economic significance, particularly in terms of employment generation, local development, and national sentiment. The creation of approximately 1,500 direct and indirect jobs and the involvement of over 100 Jordanian contractors illustrate the project's role in supporting the domestic labor market and enhancing local industrial capacity.<sup>80</sup> From a human development perspective, such initiatives contribute to skills transfer and workforce upskilling, especially through training in oil shale extraction, an area of growing relevance for Jordan's energy independence.

Moreover, the project brings political and social advantages and a strong sense of community ownership and attachment, particularly in marginalized areas like the central and southern Badia region. This suggests that the Attarat project is not only viewed through an economic lens but also as a symbol of national pride and strategic autonomy, especially given its role in reducing reliance on Israeli gas. Such perspectives are crucial in evaluating infrastructure projects beyond financial metrics, as they reflect grassroots-level political legitimacy, which can act as a stabilizing force or, conversely, a source of contention if disrupted.<sup>81</sup> This reflects how large-scale infrastructure projects under the BRI umbrella, often intersect with local political economies, highlighting the importance of inclusive development strategies that account for both national policy and community-level dynamics.

The strategic, technological, and geopolitical significance of the Attarat project within Jordan's energy transition and its broader role in regional development is worth noting. Jordan's adoption of direct burning technology for oil shale positions it as a global pioneer, second only to Estonia.<sup>82</sup> This not only represents a milestone in energy innovation and diversification for Jordan but also sets a technological precedent for other Middle East and North Africa (MENA) countries that face similar energy security challenges. Generally speaking, China focuses on spreading technologies, which serves its ultimate BRI vision of mutual advancement. In this context, Al-Saket, Advisor of International Cooperation Office / Supervisor of Asian Relations Division at the Ministry of Planning & International Cooperation said, "the Chinese focuses on disseminating technologies." While expressing China's involvement with Jordan within the broader BRI projects she added, "they also offered to cooperate with AI programs at schools."<sup>83</sup> Economically, the potential to export energy and technology could allow Jordan to leverage its early-mover advantage into a regional leadership role, aligning with goals of economic diversification and increased regional trade integration. Furthermore, the assertion that Jordan could become a regional energy hub is reinforced by its geostrategic location in the Levant, making it a natural conduit for energy trade and interconnectivity among neighboring states.

China's financial assistance in the Attarat project is important to not as smaller countries like Jordan benefit from the win-win approach. This can be connected with a wider geopolitical vision, suggesting that economic interdependence, driven by shared energy infrastructure and prosperity, may foster regional peace and stability, a core tenet of China's BRI. This aligns with BRI's narrative of "peace through development", where infrastructure and economic cooperation are seen as tools for stabilizing fragile regions.<sup>84</sup>

### *Benefits of the Attarat Project for China*

Jordan's participation in the Attarat project illustrates how BRI mechanisms are operationalized through localized partnerships that serve both economic and strategic ends, creating bilateral ties that are deeply embedded in China's long-term regional calculus. Thus, the project can be viewed as both a symbol and a conduit of China's growing footprint in the Middle East through infrastructure diplomacy.<sup>85</sup> Jordan's geopolitical location at the crossroads of Asia, Africa, and Europe, makes it vital for connectivity of the BRI. This positioning enhances Jordan's appeal as a conduit for energy trade, infrastructure integration, and regional connectivity. Jordan is perceived as a gateway to the Middle East for China, which posit that countries increasingly engage in cross-border cooperation to mitigate volatility in global energy markets and strengthen collective security and sustainability goals. Furthermore, China's engagement with Jordan through the Attarat project emphasizes harmonization and coordination, which signals a normative dimension to China–Jordan cooperation that aligns with emerging global energy governance standards. This includes attention to energy efficiency, renewables, and sustainability, reinforcing China's strategic pivot toward green development within the BRI framework. Therefore, Jordan is a critical strategic partner in the BRI, not only for its location and political stability but also for its ability to mediate security, facilitate trade, and promote regional cooperation.

In the year 2014, during the China-Arab States Cooperation Forum. President Xi Jinping unveiled the "1+2+3" cooperation framework. This strategic proposal categorizes China's engagement priorities with Arab states in: (1) energy cooperation as the core, (2) infrastructure, trade, and investment as two key pillars, and (3) collaboration in high-tech fields such as nuclear power, renewable energy, and satellite technology.<sup>86</sup> The Attarat project aligns strongly with all three domains, particularly by advancing energy security, bolstering industrial and technological cooperation, and embedding Chinese investment models within Jordan's domestic energy infrastructure.

This engagement with Jordan created opportunities for Chinese companies to expand their market presence in the Middle East.<sup>87</sup> Such market expansion allows Chinese companies to explore new markets in the region, which is crucial for China's economic strategy, as it seeks to mitigate risks associated with over-reliance on domestic markets. Additionally, trade and economic growth help China secure a stable supply of goods from the Middle East region. This helps the BRI to serve as a platform for Chinese firms to establish a presence in Jordan and potentially expand into neighboring markets. Moreover, by engaging with Jordan through the Attarat project, China enhances its diplomatic ties in the Middle East, a region traditionally influenced by Western powers.<sup>88</sup> Eventually, such relationship then falls within China's purview of countering U.S. influence.<sup>89</sup> By providing financial support and infrastructure development, China positions itself as a strategic partner to Jordan, potentially influencing a shift in Jordan's foreign policy orientation toward Beijing and away from traditional Western alliances. This strategy aligns with China's broader goal of expanding its influence in the Middle East and globally in support of its BRI objectives.

## Conclusion

The Attarat Power plant Project remains a promising solution for Jordan's long-term energy security needs. The authors perceives that the project as a win-win endeavour because it offers benefits to both parties. Notwithstanding the arbitration dispute, shaped in part by complex political dynamics stemming from the U.S.-China rivalry, the project stands as a testament to the potential of international cooperation in the energy sector, offering valuable lessons for future cross-border energy initiatives. More importantly, the project symbolizes a pivotal collaboration between Jordan and China, offering substantial benefits for both nations despite the challenges faced throughout its development. It is a key national interest for Jordan, as it offers the potential to diversify local energy sources and enhance energy self-sufficiency. The project is strategically important for China as well, since it represents a prominent BRI project that will facilitates greater investment opportunities in Jordan and the broader Middle East. Moreover, the project is part of a broad plan to connect the electricity grid within the Levant region, which will ultimately serve one of the BRI's main pillars which is connectivity. Additionally, the project boosts China's foot hold in the Levant region and the wider Middle East. Hence, the project serves the respective interests of both China and Jordan, reinforcing the argument that it represents a successful and mutually beneficial win-win venture.

## Notes

<sup>1</sup> *Attarat Power Company (APCO)*, 2020.

<sup>2</sup> *Ibid.*

<sup>3</sup> Jeremy Boak and Gordon I. Atwater and Joseph P. Riva and Adam Augustyn and Robert Curley and John P. Rafferty and Richard Pallardy and Emily Rodriguez and Veenu Setia and Amy Tikkanen. *Oil shale*. *Britannica*. nd.

<sup>4</sup> *Attarat Power Company (APCO)*, 2020.

<sup>5</sup> Ahmad Hammad and Jamil Al Asfar. Comparative study on direct burning of oil shale and coal. International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2016) At: USA. Volume: AIP Conference Proceedings, vol.1863, 030024, 2017.

<sup>6</sup> Associated Press. Troubled New Power Plant Leaves Jordan in Debt to China, Raising Concerns Over Beijing's Influence. *VOA*. July 9, 2023.

<sup>7</sup> Afnan Abu Yahia. Jordan seeks to attract Chinese billions, but will the US allow it? *The Cradle.CO*. October 2, 2023. Also see Xinhua, China, Jordan announce strategic partnership. *China Daily*, September 9, 2015.

<sup>8</sup>Hussam A Daoud. Analysis of Jordan's Foreign Trade with a Focus in its Economic Relations and Trade with China from 1990-2021. *The Seyblod Report*. Vol. 18, No. 05. May 18, 2023.

<sup>9</sup>Xinhua. Key takeaways from BRI white paper. The State Council of the People's Republic of China. October 11, 2023.

<sup>10</sup>China Daily. The Belt and Road Initiative: A Key Pillar of the Global Community of Shared Future. October 11, 2023.

<sup>11</sup>Ministry of Foreign Affairs People's Republic of China. Yang Jiechi on the Belt and Road Initiative and Preparations for the Second Belt and Road Forum for International Cooperation. March 30, 2019a.

<sup>12</sup>Xinhua, 2023.

<sup>13</sup>Ministry of Foreign Affairs People's Republic of China, 2019a.

<sup>14</sup>Hussam A Daoud, 2023.

<sup>15</sup>Hanna Davis. How Jordan is stuck in billions of dollars in debt to China. *The New Arab*. August 02, 2023.

<sup>16</sup>Isabel Debre. Jordan rues \$2.1b project with China. *The Associated Press*. Arkansas Democrat Gazette. July 09, 2023.

<sup>17</sup>Xinhua, Chinese consortium provides 1.58 billion USD to finance oil shale project in Jordan. *People's Daily Online*. March 17, 2017.

<sup>18</sup>Jesse Marks. Jordan-China Relations: Taking Stock of Bilateral Relations at 45 Years. *The Henry L. Stimson Center*. August 24, 2022.

<sup>19</sup>Abdalhaleem Man'a Al Adwan. The Jordanian-Chinese Strategic Partnership. *Euro Journal of Social Sciences*. ISSN 1450-2267, Vol. 58, Issue 4. November 4, 2019, pp. 304-316.

<sup>20</sup>Davis Hanna, 2023.

<sup>21</sup>Jesse Marks, 2022.

<sup>22</sup>Isabel Debre, 2023a.

<sup>23</sup>Michal Himmer & Zdenek Rod. Chinese debt trap diplomacy: reality or myth? *Journal of Indian Ocean Region*, April 13, 2023.

<sup>24</sup>Jesse Marks, 2022.

<sup>25</sup>Afnan Abu Yahia, 2023. Also see Xinhua, 2015.

<sup>26</sup>Ibid.

<sup>27</sup>Isabel Debre, 2023b.

<sup>28</sup>Hanna Davis, 2023.

<sup>29</sup>Jesse Marks, 2022.

<sup>30</sup>Mustafa Zawati. Alwajeh Alakhar Leazmat Mashroo Alattarat. Ma Elaqat Etifaqiat Gas Alihtilal Maa Alordon, Wa Tadaeyat Qadeyat Altahkeem? [The Other Side of the Attarat Project Crisis. What is the Relationship of the Occupation's Gas Agreement with Jordan, and the Reprecussions of the Arbitration Case?]. *Arabic Post*, July 20, 2023.

<sup>31</sup>Haradhan Kumar Mohajan. Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development*, December 10, 2018.

<sup>32</sup>JO24. Hijazin Yaktoon An Moghalatat Hawla Mashroo Alattarat.. Wa Yuqadem Moqtarahat Wa Huloul [Hijazin Writes About Fallacies Anout the Attarat Project. And Presents Suggestions and Solutions]. July 11, 2023. Also see Mohammad Abu Sarhan & Andrzej Bien & Szymon Barczentewicz & Rana Hassan. A Review of Electricity and Renewable Energy Sectors Status and Prospect in Jordan. *Research Gate. PRZEGŁAD ELEKTROTECHNICZNY*, ISSN 0033-2097, R. 97 NR 9/2021. September 2021.

<sup>33</sup>Ibid.

<sup>34</sup>Near East Group (NE Group). Also see Attarat Power Company (APCO), 2020.

<sup>35</sup>JO24, 2023.

<sup>36</sup>Marketline. *Company Profile: Eesti Energia AS. Course Sidekick*, April 10, 2023.

## Navigating the Attarat Power Plant Project Between Jordan and China

<sup>37</sup> *Ammon News*. Hijazin Yakshif Tafaseel Tawqee Etifaqeyat Alattarat Wa Haithiyat Alwosoul Lilmahkama Wa Yaqtareh Holoul [Hijazin Reveals the Details of Signing the Attarat Agreement, the Case for Reaching the Court, and Proposes Solutions], July 11, 2023. Also see *Attarat Power Company (APCO)*, 2020.

<sup>38</sup> Jesse Marks, 2022.

<sup>39</sup> Ibid.

<sup>40</sup> *JO24*, 2023.

<sup>41</sup> AidData. ICBC contributes \$594 million to syndicated buyer's credit loan for 554MW Attarat Oil Shale Fired Power Plant Project (Linked to Project ID#64457, ID#72499, ID#72500, ID#72502). *William & Mary's Global Research Institute, Williamsburg, Virginia*.

<sup>42</sup> *YTL Corporation Berhad*. YTL Power International Increases Stake In APCO to 45%. Attarat Power Company (APCO) Announces Financial Close For The USD 2.1 Billion Oil Shale Power Project in Jordan, March 16, 2017.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid.

<sup>45</sup> Lixin Yu & Waling Chen. The Theory and Practices of Mutual Benefit and Win-Win Strategy. *World Scientific Connect*, March 3, 2025.

<sup>46</sup> Yi Wang. Build a New Type of International Relations Featuring Win-Win Cooperation: China's Answer to the Question "Where Are the International Relations of the 21st Century Heading". *Ministry of Foreign Affairs of the People's Republic of China*, July 1, 2016.

<sup>47</sup> *China Daily*, 2023.

<sup>48</sup> *Ammon News*, 2023.

<sup>49</sup> AidData.

<sup>50</sup> Ibid.

<sup>51</sup> Nader Shahrouri, interviewed by Buthaina Zawahrah, *Buthaina Zawahrah*, March 13, 2025.

<sup>52</sup> *Ammon News*, 2023.

<sup>53</sup> *Al Pheniq YouTube Channel*. Al Alshafafiyah Fe Istithmar Alattarat, Jameiyat Alshafafeiyah Alordoneiyah [Transparency in Perfumery Investment, Jordanian Transparency Society],, February 23, 2021.

<sup>54</sup> AidData.

<sup>55</sup> Isabel Debre. 2023a.

<sup>56</sup> Isabel Debre. 2023b.

<sup>57</sup> Sarah Abu-Saad. Attarat 'grave deception' case still ongoing, prospects not good for NEPCO. *Jordan News*, April 07, 2022.

<sup>58</sup> Isabel Debre, 2023b.

<sup>59</sup> *Petra*. Arbitration Panel Dismisses Case on Exorbitant Pricing in NEPCO-APCO Agreement. August 6, 2024.

<sup>60</sup> Mustafa Zawati, 2023.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid.

<sup>63</sup> Isabel Debre, 2023b.

<sup>64</sup> Anonymous Chinese Diplomat, interviewed by Buthaina Zawahrah, *Buthaina Zawahrah*, April 30, 2025.

<sup>65</sup> Isabel Debre, 2023b.

<sup>66</sup> *Ministry of Foreign Affairs, People's Republic of China*. Wang Yi: There Is No So-called "Dept Trap" in China-Cameroon Cooperation. June 23, 2019b.

<sup>67</sup> Jennifer Kavanagh. The United States and China in The Multi-Aligned Middle East. *The Institute of Peace and Diplomacy*. January 9, 2024.

<sup>68</sup> *U.S. Department of State*. Jordan - United States Department of State (2021–2025 Archive). (n.d.).

<sup>69</sup> *USAID Jordan Country Profile* - August 2020, USAID: United States Agency for International Development. United States of America. 2020.

<sup>70</sup> Global Data. Maan Solar PV Park. Report Code: GDPE30283PP-MP-L5. November 9, 2023.

<sup>71</sup> Nada Abdul Rahim and Najwa Eid. Energy Projects in Jordan. October 2017.

<sup>72</sup> Jordan Times. \$40m USAID-funded project launched to support energy sector. March 26, 2022.

<sup>73</sup> USAID, 2020.

<sup>74</sup> Elizabeth Whitman. Jordan yearns for Chinese investment. *Al Jazeera*. December 4, 2013.

<sup>75</sup> Jennifer Kavanagh, 2024.

<sup>76</sup> U.S. Department of State. (n.d.). *Jordan - United States Department of State (2021–2025 Archive)*.

<sup>77</sup> Ammon News, 2023. Also see *Al Pheniq Channel*, 2021.

<sup>78</sup> Ibid.

<sup>79</sup> JO24, 2023.

<sup>80</sup> Attarat Power Company (APCO), 2020.

<sup>81</sup> Mustafa Zawati, 2023.

<sup>82</sup> Attarat Power Company (APCO), 2020.

<sup>83</sup> Wafaa Al-Saket, interviewed by Buthaina Zawahrah, *Buthaina Zawahrah*, March 27, 2025.

<sup>84</sup> Belt and Road Portal. Peace and development with the Belt and Road Initiative. February 9, 2018.

<sup>85</sup> Ibid.

<sup>86</sup> Jonathan Fulton. China-Saudi Arabia Relations Through the '1 + 2+3' Cooperation Pattern. *Asian Journal of Middle Eastern and Islamic Studies*, November 2020.

<sup>87</sup> Isabel Debre, 2023b.

<sup>88</sup> Jennifer Kavanagh, 2024.

<sup>89</sup> Ibid.

## References

- Abdul Rahim, Nada and Eid, Najwa. October 2017. Energy Projects in Jordan. Retrieved from: [https://export.flandersinvestmentandtrade.com/sites/fit\\_domains/files/media/report/Energy%2520projects%2520in%2520Jordan\\_2.pdf](https://export.flandersinvestmentandtrade.com/sites/fit_domains/files/media/report/Energy%2520projects%2520in%2520Jordan_2.pdf)
- Abu Yahia, Afnan. October 2, 2023. Jordan seeks to attract Chinese billions, but will the US allow it? The Cradle.CO. <https://new.thecradle.co/articles-id/7637>
- Abu-Saad, Sarah. April 07, 2022. Attarat 'grave deception' case still ongoing, prospects not good for NEPCO. Jordan News. <https://www.jordannews.jo/Section106/Features/Attarat-grave-deception-case-still-ongoing-prospects-not-good-for-NEPCO-15291>
- Abu Sarhan, Mohammad & Bien, Andrzej & Barczentewicz, Szymon & Hassan, Rana. September 2021. A Review of Electricity and Renewable Energy Sectors Status and Prospect in Jordan. Research Gate. PRZEGŁAD ELEKTROTECHNICZNY, ISSN 0033-2097, R. 97 NR 9/2021. [https://www.researchgate.net/publication/354392768\\_A\\_Review\\_of\\_Electricity\\_and\\_renewable\\_Energy\\_Sectors\\_Status\\_and\\_Prospect\\_in\\_Jordan](https://www.researchgate.net/publication/354392768_A_Review_of_Electricity_and_renewable_Energy_Sectors_Status_and_Prospect_in_Jordan)
- Ahmad, Abdullahi Ayoade & Bin Salleh, Mohd Afandi & Bin Mohamed, Abdul Majid Hafiz. 2020. Can U.S. Aid and Assistance Continue Playing a Soft Power Role in the Muslim World? *Intellectual Discourse*. IIUM Press. <https://journals.iium.edu.my/intdiscourse/index.php?id/article/view/1667/949>

- AidData. ICBC contributes \$594 million to syndicated buyer's credit loan for 554MW Attarat Oil Shale Fired Power Plant Project (Linked to Project ID#64457, ID#72499, ID#72500, ID#72502). William & Mary's Global Research Institute, Williamsburg, Virginia.  
<https://china.aiddata.org/projects/52552/>
- Al Adwan, Abdalhaleem Man'a. November 4, 2019. "The Jordanian-Chinese Strategic Partnership," *Euro Journal of Social Sciences* 58, no. 4: 304-316.
- Al Pheniq Channel. February 23, 2021. Alshafafiyah Fe Istithmar Alattarat, Jameiyat Alshafafeiyah Alordoneiyah [Transparency in Perfumery Investment, Jordanian Transparency Society].  
<https://www.youtube.com/watch?v=bnwBh2-3gFk&t=8s>
- Ammon News. July 11, 2023. Hijazin Yakshif Tafaseel Tawqee Etifaqeyat Alattarat Wa Haithiyat Alwosoul Lilmahkama Wa Yaqtareh Holoul [Hijazin Reveals the Details of Signing the Attarat Agreement, the Case for Reaching the Court, and Proposes Solutions].  
<https://www.ammonnews.net/article/776476>  
[https://europeanjournalofsocialsciences.com/issues/PDF/EJSS\\_58\\_4\\_04.pdf](https://europeanjournalofsocialsciences.com/issues/PDF/EJSS_58_4_04.pdf)
- Ammon News. September 25, 2017 Jordan approves establishment of Chinese cultural center. Online Site.  
<https://en.ammonnews.net/article/36053>
- Associated Press. July 9, 2023. Troubled New Power Plant Leaves Jordan in Debt to China, Raising Concerns Over Beijing's Influence. *VOA*.  
<https://www.voanews.com/a/troubled-new-power-plant-leaves-jordan-in-debt-to-china-raising-concerns-over-beijing-s-influence/7169506.html>
- Attarat Power Company (APCO). 2020.  
<https://attaratpower.com.jo>
- Belt and Road Portal. February 9, 2018. Peace and development with the Belt and Road Initiative.  
<https://eng.yidaiyilu.gov.cn/p/47674.html>
- Boak, Jeremy & Atwater, Gordon I. & Riva, Joseph P. & Augustyn, Adam & Curley, Robert & Rafferty, John P. & Pallardy, Richard & Rodriguez, Emily & Setia, Veenu & Tikkanen, Amy. (nd.). Oil shale. Britannica.  
<https://www.britannica.com/science/oil-shale>
- Business Standard. July 5, 2023. Troubled power plant leaves Jordan in debt to China, raises concerns.  
[https://www.business-standard.com/world-news/troubled-power-plant-leaves-jordan-in-debt-to-china-raises-concerns-123070500245\\_1.html](https://www.business-standard.com/world-news/troubled-power-plant-leaves-jordan-in-debt-to-china-raises-concerns-123070500245_1.html)
- Chau, Jocelyn. February 27, 2022. China welcomes Jordan's active participation in Belt and Road Initiative. The Jordan Times.  
<https://jordantimes.com/news/local/china-welcomes-jordans-active-participation-belt-and-road-initiative>
- China Daily. October 11, 2023. The Belt and Road Initiative: A Key Pillar of the Global Community of Shared Future.  
<https://global.chinadaily.com.cn/a/202310/11/WS6525de2ba31090682a5e7d01.html>
- Daoud, Hussam A. May 18, 2023. "Analysis of Jordan's Foreign Trade with a Focus in its Economic Relations and Trade with China from 1990-2021," *The Seybold Report* 18, No. 5: 914-937.  
[https://seyboldreport.org/article\\_overview?id=MDUyMDIzMTAxODIzMzMzMDc4](https://seyboldreport.org/article_overview?id=MDUyMDIzMTAxODIzMzMzMDc4)
- Davis, Hanna. August 02, 2023. How Jordan is stuck in billions of dollars in debt to China. The New Arab. Online Website.  
<https://www.newarab.com/analysis/how-jordan-stuck-billions-dollars-debt-china>

- Debre, Isabel. July 09, 2023a. Jordan rues \$2.1b project with China. The Associated Press. Arkansas Democrat Gazette.  
<https://www.arkansasonline.com/news/2023/jul/09/jordan-rues-21b-project-with-china/>
- Debre, Isabel. July 05, 2023b. Concerns over Beijing's influence as new power plant puts Jordan in debt to China. The Times of Israel.  
<https://www.timesofisrael.com/concerns-over-beijings-influence-as-new-power-plant-puts-jordan-in-debt-to-china/amp/>
- EIA. March 2014. Jordan. U.S. Energy Information Administration.  
<https://www.eia.gov/international/analysis/country/JOR>
- Global Data. November 9, 2023. Maan Solar PV Park. Report Code: GDPE30283PP-MP-L5. Hammad, Ahmad & Al Asfar, Jamil. September, 2017. Comparative study on direct burning of oil shale and coal. International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2016) At: USA. Volume: AIP Conference Proceedings, vol.1863, 030024. 2017.  
[https://www.researchgate.net/publication/316636579\\_Comparative\\_study\\_on\\_direct\\_burning\\_of\\_oil\\_shale\\_and\\_coal](https://www.researchgate.net/publication/316636579_Comparative_study_on_direct_burning_of_oil_shale_and_coal)
- Himmer, Michal & Rod, Zdenek. April 13, 2023. "Chinese debt trap diplomacy: reality or myth?," *Journal of Indian Ocean Region* 18, no.3: 250-272.  
<https://www.tandfonline.com/doi/full/10.1080/19480881.2023.2195280#d1e133>
- Hochberg, Michael. August 19, 2015. Jordan's Energy Future: A Path Forward. Middle East Institute MEI.  
<https://www.mei.edu/publications/jordans-energy-future-path-forward>
- JO24. July 11, 2023. Hijazin Yaktoon An Moghalatat Hawla Mashroo Alattarat. Wa Yuqadem Moqtarahat Wa Huloul [Hijazin Writes About Fallacies Anout the Attarat Project. And Presents Suggestions and Solutions].  
<https://jo24.net/article/478119>
- Jordan Times. March 26, 2022. \$40m USAID-funded project launched to support energy sector.  
<https://jordantimes.com/news/local/40m-usaid-funded-project-launched-support-energy-sector>
- Kavanagh, Jennifer. January 9, 2024 The United States and China in The Multi-Aligned Middle East. The Institute of Peace and Diplomacy.  
<https://peacediplomacy.org/2024/01/09/the-united-states-and-china-in-the-multi-aligned-middle-east-a-new-strategy-for-american-influence/>
- Marks, Jesse. August 24, 2022. Jordan-China Relations: Taking Stock of Bilateral Relations at 45 Years. The Henry L. Stimson Center.  
<https://www.stimson.org/2022/jordan-chinese-relations-taking-stock-of-bilateral-relations-at-45-years/>
- Marketline April 10, 2023. Company Profile: Eesti Energia AS. Course Sidekick.  
<https://www.coursesidekick.com/business/175525>
- Mohajan, Haradhan Kumar, December 10, 2018. "Qualitative Research Methodology in Social Sciences and Related Subjects," *Journal of Economic Development, Environment and People* 7, no.1: 23-48.  
[https://mpra.ub.uni-muenchen.de/85654/1/MPRA\\_paper\\_85654.pdf](https://mpra.ub.uni-muenchen.de/85654/1/MPRA_paper_85654.pdf)
- Ministry of Foreign Affairs People's Republic of China. March 30, 2019. Yang Jiechi on the Belt and Road Initiative and Preparations for the Second Belt and Road Forum for International Cooperation.  
[https://www.fmprc.gov.cn/mfa\\_eng/xw/zyjh/202405/t20240530\\_11341281.html](https://www.fmprc.gov.cn/mfa_eng/xw/zyjh/202405/t20240530_11341281.html)

- Ministry of Foreign Affairs, People's Republic of China. June 23, 2019b. Wang Yi: There Is No So-called «Dept Trap» in China-Cameroon Cooperation.  
[https://www.fmprc.gov.cn/eng/wjb/zzjg\\_663340/fzs\\_663828/xwlb\\_663830/202406/t20240606\\_11392390.html](https://www.fmprc.gov.cn/eng/wjb/zzjg_663340/fzs_663828/xwlb_663830/202406/t20240606_11392390.html)
- Near East Group (NE Group).  
<https://www.neareastgroup.com>
- Petra. July 7, 2020. Sustainability, self-reliance are key themes of energy sector strategy: Minister.  
[https://petra.gov.jo/Include/InnerPage.jsp?ID=26591&lang=ar&name=en\\_news](https://petra.gov.jo/Include/InnerPage.jsp?ID=26591&lang=ar&name=en_news)
- Petra. August 6, 2024. Arbitration Panel Dismisses Case on Exorbitant Pricing in NEPCO-APCO Agreement. Jordan News Agency.  
[https://www.petra.gov.jo/Include/InnerPage.jsp?ID=62308&lang=en&name=en\\_news](https://www.petra.gov.jo/Include/InnerPage.jsp?ID=62308&lang=en&name=en_news)
- Schenker, David. April 25, 2023. Jordan's retreat from China on 5G could signal a growing distance. The Hill. Nexstar Media Inc.  
<https://thehill.com/opinion/technology/3966479-jordans-retreat-from-china-on-5g-could-signal-a-growing-distance/>
- The Theory and Policies of Mutual Benefit and Win-Win Strategy. 2001.  
[https://www.worldscientific.com/doi/pdf/10.1142/9789813236349\\_0001](https://www.worldscientific.com/doi/pdf/10.1142/9789813236349_0001)
- USAID. 2020. USAID Jordan Country Profile - August 2020, USAID: United States Agency for International Development. United States of America.  
<https://policycommons.net/artifacts/18283359/jordan-country-profile/19183474/>
- U.S. Department of State. (n.d.). Jordan - United States Department of State (2021–2025 Archive).  
<https://2021-2025.state.gov/countries-areas/jordan/>
- Wang, Yi. July 1, 2016. Build a New Type of International Relations Featuring Win-Win Cooperation: China's Answer to the Question "Where Are the International Relations of the 21st Century Heading". Ministry of Foreign Affairs of the People's Republic of China.  
<https://fidc.ris.org.in/sites/fidc.ris.org.in/files/mediacentre/Build%20a%20New%20Type%20of%20International%20Relations%20Featuring%20WinWin%20Cooperation.pdf>
- Whitman, Elizabeth. December 4, 2013. Jordan yearns for Chinese investment. Al Jazeera.  
<https://www.aljazeera.com/features/2013/12/4/jordan-yearns-for-chinese-investment>
- Xinhua. September 9, 2015. China, Jordan announce strategic partnership. China Daily.  
[https://www.chinadaily.com.cn/china/2015-09/09/content\\_21835445.htm](https://www.chinadaily.com.cn/china/2015-09/09/content_21835445.htm)
- Xinhua. March 17, 2017. Chinese consortium provides 1.58 billion USD to finance oil shale project in Jordan. People's Daily Online.  
[https://www.chinadaily.com.cn/business/2017-03/17/content\\_28591182.htm](https://www.chinadaily.com.cn/business/2017-03/17/content_28591182.htm)
- Xinhua. October 11, 2023. Key takeaways from BRI white paper. The State Council of the People's Republic of China.  
[https://english.www.gov.cn/news/202310/11/content\\_WS6526994fc6d0868f4e8e024a.html](https://english.www.gov.cn/news/202310/11/content_WS6526994fc6d0868f4e8e024a.html)
- YTL Corporation Berhad. March 16, 2017. YTL Power International Increases Stake In APCO to 45%. Attarat Power Company (APCO) Announces Financial Close For The USD 2.1 Billion Oil Shale Power Project in Jordan.  
<https://www.ytl.com/shownews.asp?newsID=51>
- Yu, Lixin & Chen, Waling. March 3, 2025. The Theory and Practices of Mutual Benefit and Win-Win Strategy. World Scientific Connect.  
<https://www.worldscientific.com/worldscibooks/10.1142/10854#t=aboutBook>

Buthaina Zawahrah and Geetha Govindasamy

Zawati, Mustafa. July 20, 2023. Alwajeh Alakhar Leazmat Mashroo Alattarat.. Ma Elaqat Etifaqeiat Gas Alihtilal Maa Alordon, Wa Tadaeyat Qadeyat Altahkeem? [The Other Side of the Attarat Project Crisis. What is the Relationship of the Occupation’s Gas Agreement with Jordan, and the Reprecussions of the Arbitration Case?]. Arabic Post.  
<https://arabicpost.live/2023/07/20/تاراطعل-اورشم-رابخ/>