

## Interpretation of China's Global Advocacy for Renewable Energy through Lenses of Liberalism as an International Relations Theory

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**Abstract:** There has been numerous literature analysing the international expansion of renewable energy utilizing realism as an International Relations theory from both For and Against perspectives, such as casting doubt on fair cooperation or urging individual states to catch up with the global competition. This paper attempts to offer an alternative explanation to the international cooperation between China and the world in the field of renewable energy through the lenses of liberalism. The role and influence of liberalism in explaining this phenomenon will be presented in the form of compare and contrast between liberalism and realism, with secondary theories included such as institutional liberalism, idealism and democratic peace theory. The rapid growth of renewable energy globally in recent decades could be attributed to individual states' policies, intergovernmental cooperation and advocacy by international organizations. The paper demonstrates that China's ability to develop renewable energy can be correspondingly attributed to its willingness to cooperate under the framework of liberalism. It actively participates in international agreements, works with international organizations, and trades with other countries. With cooperative efforts, it succeeds in mitigating the traditional energy crisis and further promoting energy transition. In conclusion, liberalism provides a more accurate and innovative explanation to China's advocacy for renewable energy compared to realism, and it can be argued that China's model of energy transformation could be learned by the international community to tackle climate change.

**Keywords:** Liberalism, China, Renewable energy, Institutionalism, Democratic Peace Theory, Idealism

### Introduction

China has been facing shortages of water, arable land, minerals and oil since the late 20th century. The most embarrassing of these shortages is the oil crisis. The oil countries have long held the world's oil supply, and in 1997 China launched a new energy policy, but it does not seem to have had any real effect ("新能源基本建设项目管理的暂行规定", 1997). To break the deadlock, in 2012, China also officially launched a Sustainable Development Strategy (Chinese Academy of Sciences, 2012) based on the World Sustainable Development Strategy, which advocates environmental protection and the development of new energy sources. China has initially built an energy Internet, and its development goals have moved from pilot demonstration to diversification and scale. Recent breakthroughs (discussed in "Idealism" section) have also been made in key techniques of the Energy Internet, which have provided strong support for renewable energy consumption, technological innovation, business model innovation, market transaction and sustainable development of the Energy Internet, and gradually established the leading position of the energy Internet.

Realism and liberalism are the two dominant theory frameworks in the field of International Relations (IR). Realism roots from ancient philosophers and politicians' denial about the existence of state's morality and promotion of state's pursuing their own interests with greed just like individuals, notably Thucydides' discussion about the *Melian Dialogue* and Machiavelli's ideology (Korab-Karpowicz, 2017). Liberalism also originates from philosophical principles about personal liberty, and since it would be jeopardized under a monarchy that has no constraints, classical liberals argued that a state (preferably a republic) should have its military power limited by law to achieve domestic and international peace, which prevents citizens' liberty from being subverted (Gaus et al., 2018). After the World Wars, both realism and liberalism shifted their focus away

from explaining human nature to state behaviors. The rise of neorealism, which portrays states as lone wolves filled with eager (for power) and insecurity (about being overwhelmed in an anarchic international environment), is countered by neoliberal theorists like Keohane and Nye pointing out the presence of structural interdependence between states ("The Impact Of The Complex Interdependence Politics Essay", n.d.) and other modern liberal theories about game theory, IOs, globalization and so on.

China's participation in global advocacy of RE has been interpreted through the lenses of realism by numerous literatures. Some exemplify (Goron, 2018) that the unfair distribution of price-setting and job creation hinders international cooperation, others (Jaffe, 2018) appreciate China's accomplishments while interpreting it as a geopolitical strategy and call for other states to ramp up competition. More recently, the concept of "energy realism" was proposed (Ehrman, 2019) with a pragmatic-philosophic explanatory framework. Although the concept is mainly developed for opposing radical RE transition urged by domestic NGOs, it also aligns with the scepticism about international cooperation on RE. In particular, one of the pragmatic challenges faced by RE transition is the state's loss of influence in oil trade along with risks of entering the RE field with little influence compared to existing RE giants like China. In contrast, there is little literature interpreting China's global RE involvement via the lenses of liberalism, despite a large number of them discussing on the level of specific state-to-state cooperation (discussed below) and/or chronological overview (Zhao et al., 2011). Given that liberalism has the equivalent significance in IR theory, an overview from its perspective would provide a novel and valuable perspective compared to the realist literatures. This paper therefore aims at interpreting China's global advocacy in RE through the lenses of three sub-theories of liberalism, namely institutional liberalism, idealism and democratic peace theory (DPT).

## **Institutional Liberalism and China's RE Advocacy**

Unlike classical liberalism which stresses about how personal liberty can be protected by democratic states themselves as well as intergovernmental peace established between them, institutional liberalism focuses on how IOs could have an essential place in this process. Despite not having enforcement power superior to states, the establishment of international norms is enough to pressure states to choose between conforming or facing worldwide backlash. Meanwhile, IOs can also attract state's compliance by providing a platform for fair and transparent exchange of information and resources, therefore granting participating states joint gain (Simmons & Martin, 2002).

One example of China's RE cooperation with IOs is the International Energy Agency (IEA), which, counterintuitively, was created in 1974 by western countries to ensure oil security amid the Oil Crisis. Despite its initial goal, by late 1970s IEA had formally started several *Research and Development* (R&D) Programmes in purpose of "developing new energy technologies and make possible rapid application of alternative energy sources so as to respond to energy needs in the long-term" (Scott, 1994), including geothermal, biomass and solar energy. As an association country, China have been actively participating in IEA events via national institutions and universities. For example, representative experts from the *China National Renewable Energy Centre* (CNREC) presented the current trend and future plan of energy structure transition on annual workshops ("Sixth Annual Expert Workshop: Challenges in Electricity Decarbonisation", 2019), and a recently-held joint workshop between IEA and Tsinghua University addressed the need to improve energy efficiency of central cooling systems in buildings, with one of the suggested solutions being increased natural ventilation by renovating existing buildings and pushing new regulations for future buildings ("6th IEA-Tsinghua Joint Workshop: Sustainable Recovery in Building Sector", 2020). In addition to one-off events and workshops, China has also been involved in long-term projects. One of IEA's subgroup, the *Photovoltaic Power Systems Programme* (IEA-PVPS), has set up 18 "Tasks" for a comprehensive approach to promote solar energy and pursue the tasks globally by constructing teams dedicated to each goal consisting of international experts. Multiple researchers from the Chinese Academy of Science (CAS) have been appointed as team members in tasks ("Member Contacts - China", n.d.) such as monitoring the performance and decommissioning of currently installed photovoltaic systems (Task 13) and technical development of photovoltaic-power vehicles (Task 17). Realism, which has remained sceptical towards IOs by regarding it as unsustainable, ineffective and nothing but visualization of state-to-state power distribution, would be unable to explain the utility of such cooperation since most of IOs about RE are politically neutral, not dominated by any states and brings no biased geopolitical benefits to specific states. Instead, institutional liberalism provides reasonable justification as these IOs provide a highly convenient, transparent and goal-directed platform for individual states to keep updated with current technological development and international commitments, therefore ensuring the right direction of developing RE both domestically and internationally.

## **Idealism and China's RE Advocacy**

Idealism is thought to be an ancestor of liberalism but has been present throughout the development of liberalism to today. Although idealism is commonly being considered on the same side with liberalism, an idealist would argue that it is not gains in economy or other aspects but ideology that drives states to behave and interact in the way they do. Immoral, authoritarian states create international conflicts, while democracies have the obligation to defend and exert moral values across the world. Idealists deny the assumption of permanent anarchy in international environment and believe that it can be replaced by an international society with shared political values (Weber, 2014).

Since it is normalised, countries neglectful about the energy crisis and environmental pollution would likely be condemned. On June 1, 2017, US President Donald Trump officially announced at the White House that he was withdrawing from the Paris Climate Agreement, which had been in place for just under a year. The move casts a veil of uncertainty over the climate issue, which the world is working together to resolve, and reflects Trump's consistent policy of unilateralism on energy policy and environmental issues, further reflecting the inaction of the United States on environmental issues and sustainable development.

As a leader in RE field, China is committed to spreading the RE policies that has gained practical experience in China to the world. At present, China has a slight advantage in Vietnam's clean energy market, especially in solar power generation. Thanks to the saturation of the local solar power market in Vietnam and the new opportunities and breakthroughs in China's power transmission and transformation technology, Vietnam's renewable energy market will gradually expand under the influence of China ("“越南-中国”新能源峰会”, 2019). In addition, the international demand for oil has gradually returned to its peak. A recent report by BP Plc (bp, 2020) envisages three long-term prospects in its annual energy outlook report, two of which believe that global oil demand will never recover from the decline caused by the coronavirus pandemic. If everything goes as usual, oil demand will drop by 10% by 2050, and in the context of rapid development, oil demand will drop by 55% from current levels in 2050, and oil demand will drop by 80% by 2050 in the forecast of net zero emissions.

Because of this, China's high profile in the RE field has inevitably been monitored and criticised by other countries. British research and analysis company Global Data said that China's nuclear power capacity is expected to surpass the United States by 2026. The company reported that between 2020 and 2030, the world may increase nuclear power capacity by 160GW, of which about 66% is expected to be carried out in China, India and Russia. China alone will account for more than 50% of the new capacity (83GW), followed by India with 8.9% (14.5GW) and Russia with 6.4% (10.5GW). Global Data also predicts that during the same period, 76GW of nuclear power capacity will be phased out globally ("《2020年国家能源互联网发展年度报告》发布 中越清洁能源合作潜力大", 2020). Arguably, climate pollution is the most criticized in China, especially the haze weather that has occurred frequently in autumn and winter in northern regions in recent years. However, it seems that China's climate control work has been fruitful. In the first eight months of 2020, the number of days with good air in Beijing increased by 20 days compared with the same period last year. That indicates that this year Beijing's air quality continued to improve. The Beijing Municipal Bureau of Ecology and Environment introduced that in August, the average concentration of fine particulate matter (PM2.5) in the city was 29 micrograms/cubic meter. From January to August this year, the concentration of four pollutants in the city continued to be the lowest during the same period, of which the cumulative concentration of PM2.5 was 41 micrograms/m<sup>3</sup>, which was the lowest among the "2+26" cities in Beijing-Tianjin-Hebei and surrounding areas; accumulated good days 170 days, an increase of 20 days year-on-year (Tao & Liu, 2020).

## **Democratic Peace Theory and China's RE Advocacy**

Democratic Peace Theory (DPT) refers to the unlikelihood of democratic states to go to war against each other, with historical root dates back to classical liberalist like Kant stating that it is a lot more difficult for republics to initiate war compared to empires due to the constraint by people's vote and the parliamentary system. Unlike the realist peace due to status quo of power distribution created by single hegemony or equilibrium (e.g. the Cold War), the democratic or liberal peace results from shared values and mutual respect of citizens' freedom from military interference (Doyle, 1983). It seems that DPT is irrelevant in the issue of international renewable energy policy, given the fact that politically democratic countries can refrain from it while the incumbent administration is right-wing, and the fact that politically authoritarian countries can actively engage in it.

However, replacing “democratic” with “renewable-energy-friendly” makes DPT a lot more applicable. And while states are unlikely to go to war because of disagreement on renewable energy, the concept of war and peace could be interpreted as dispute and cooperation. To this extent, it is possible for RE-friendly states to cooperate in the area, even if they have more dispute or even hostility in other aspects.

One noticeable example is the China-India cooperation in RE. In spite of border disputes, China and India have been holding Strategic Economic Dialogue (SED) since 2011, with the most recent one in 2019 including “future areas of collaboration and resolved to work on Renewable Energy space, Smart Grid and E-mobility sectors” (“6th India-China Strategic Economic Dialogue concludes”, 2019). While no joint RE projects have so far been established, the potential of cooperation remains high judging by willingness at state level and previous experience. Indeed, India and China have formed joint bidding pair for lower oil prices and involvement in oil field extraction (Singh, 2010), and it is reasonable that the two could explore international market in an symbiotic relationship with significant negotiation power.

Another visualization of DPT comes from China’s relation with the US, an even more unusual choice for cooperation. Counterintuitively, China has been continuously signing memorandums and having formal dialogues with the US (before Trump’s presidency) about collaboration on Research and Development (R&D) programs or simply joint declaration on advocating renewable energy (Zhao et al., 2011). One of the achievements, the *US-China Energy Efficiency Forum*, has led to research alliance of universities, a co-funded *Clean Energy Research Centre* and even an US-based training program for Chinese mayors on developing clean energy policy (U.S. Department of Energy, 2011). All of these happened while China and the US continue to exchange fire on trade disputes, ideological difference and disagreement on response to political incidents, therefore demonstrating that in the context of renewable energy, the ground of cooperation does exist between “democratic” (renewable energy friendly) states, even if it does not in many other aspects.

## Conclusion

Fitting liberalism to China’s global advocacy in Renewable Energy is not perfect, since interstate disputes still exist and China is still heavily dependent on fossil fuels in the foreseeable future, both contradict the aspects of liberalism (e.g. DPT and idealism). Nevertheless, the often non-geopolitically-driven efforts of China and their success are much better interpreted by liberalism compared to realism, which would fail to explain how China actively interacts with neutral IOs, how China criticises and is criticised purely due to commitment in energy transition, and how China is able to cooperate with states on RE despite being competitive or even hostile in other aspects. In face of climate change, the lenses of liberalism would perhaps alleviate some scepticism from other states and help forming a global alliance against climate change with practical cooperation and cautious trust.

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