



CNA Insider's Documentary on China's Contradictory Actions towards Investing in Fossil Fuel Industries

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Abstract: *The research paper analyses the documentary series-China's Contradiction: World's Biggest Clean Energy Producer and Biggest Polluter?, produced by Channel News Asia (CNA) Insider, which highlighted China's efforts in increasing coal production, despite producing huge amounts of green energy. China has emerged as the world's No.1 producer of solar energy in the world, by producing over 430 GW solar energy and is also the world's largest manufacturer of solar equipment, superseding other countries like the U.S.A., Germany, India, and Japan. In spite of being the largest producer of 'clean' energy, China has started constructing several coal power plants, to meet the country's energy requirements, by directly contradicting its statement that it will peak emissions by 2030 and attain net zero by 2060. So the study adopts case study approach to decipher China's efforts in its increased interest and investment in solar energy, and its reasons behind investing in coal plants as well, After analysis, it is concluded that China's ambitions in investing in the solar industry is for overall economic development, and the country is not yet 'ready' to become completely green because of its high dependence on coal for generating cheap electricity at all times of the year.*

Keywords: *Solar Energy, Coal Plants, CNA Insider, Case Study, China.*

1. INTRODUCTION

Solar power is the energy harnessed from the Sun which is converted into thermal or electric energy for industrial and commercial purposes. It is one of the popular types of renewable energy that does not get depleted or run-out, like the fossil fuels, and can be used forever until the Sun shines on Earth. Unlike non-renewable energy, derived from fossil fuels like coal, petroleum, and natural gas, solar energy is a 'clean' energy, which does not emit greenhouse gases like carbon di-oxide and pollute the atmosphere. Its potential was first discovered in 1839



by a French scientist called Edmond Becquerel, who found out that some materials can produce electricity while exposed to sunlight, which is now called the ‘photovoltaic effect’.

Due to the rise of global warming and prevalent climate change across the world, the demand for ‘clean’ and ‘sustainable’ energy emerged as the main focus. So to counter the climate change issue, several world countries came together and signed the ‘Paris Agreement’ at the UN Climate Change (COP21) in Paris, France on December 12, 2015, for reducing the overall temperature of the Earth and to reduce global warming. Several climate experts and scientists have pointed out that burning fossil fuels for industrial and commercial purposes emits gases like carbon di-oxide, nitrous oxide, and methane, which traps the Sun’s heat exceedingly and makes the Earth hotter, and warmer. Rising heat levels has led to climate change, which has caused increase in temperature levels, ocean acidification, rising sea levels, forest fires, droughts, loss of species, and so on. As the world cannot function without electricity, widespread solutions have been developed to tap renewable energy sources like solar and wind power as a viable alternative.

The People’s Republic of China or China is a vast country in Asia that has nurtured civilisation since ancient times, and has etched a significant part in world history in terms of trade, culture, diplomacy, warfare. And growth. Due to rapid industrialisation in the 20th and 21st century, the country ranks first in emitting greenhouse gases like CO₂, which has caused adverse health issues to its people. So, to reduce widespread pollution, the Chinese government announced that the country would aim to reach its peak emission levels by 2030 and attain neutral carbon levels, according to the Paris Agreement. In addition to reducing energy imports, China saw a business potential in mass-producing green energy and its raw materials. Along with other renewable energy projects, they increased solar energy production by mass- producing solar panels’ raw material-polysilicon, providing loans at low-interest rates by their banks to solar companies, and factories, allotting lands for solar panel factories at lesser market prices, and installing solar panels on lease, which has made them the world’s largest producer of solar energy and its raw materials, leaving behind the U.S. and E.U. countries in the dust. But, the country has not stopped building new coal plants, accounting for two-thirds of new coal plant capacity, according to a Global Energy Monitor Report. Though there are a number of reasons, CNA Insider documentary’s interviews with leading economists, and professionals shed light on the exact reasons for China’s contradictory behaviour.

2. REVIEW OF LITERATURE

Z.Y. Zhao, et.al (2013) stated that five factors- R & D, industrial plans, laws and regulations, electricity price policies and price incentive policies, developed and implemented by the Chinese government have increased the production of the Solar PV industry in China. F. Urban et.al (2016) investigated two different solar energy technologies found in China-Solar Photovoltaic (PV) and Solar Water Heaters (SWH) by drawing distinction between the two, as the former requires extensive scientific experiments enabled with sound financial and political backing, while the latter, is an indigenous Chinese equipment found in grassroot levels. D. Zhang et.al (2017) predicted China’s overall development of renewable energy in the upcoming



decades, by analysing the country's renewable energy projects and feasible situations. S. Geall and W. Shen (2018) used discourse analysis to analyse China's Solar Energy For Poverty Alleviation Programme (SEPAP) and its implications for reducing poverty and improving solar energy usage at the same time. J. Li and J. Huang (2020) analysed the overall expansion of solar energy in China, by diving deep into the subsidies and diversified prices offered, along with certain policy challenges. Y. Liu and M. Zhang (2021) reviewed some positive and negative stereotypes on solar and coal energy available in China, which the researchers concluded that people consider solar energy as 'clean' energy, but are worried about the cost, whereas they are aware of the polluting factors of coal, but like it as it is quite cheap. M. Irfan et. Al (2021) quantitatively analysed the consumers' willingness to use solar energy in China, by concluding that self-effectiveness, environmental perception, and general awareness remains as contributing factors. Chen. B (2023) did content analysis of over 315 Hong Kong newspaper articles on the government's initiative scheme called the Feed-in Tariff (FiT) scheme, by concluding that the mass media should assume the role of watchdog by monitoring the industries' solar projects. X. Li et. al (2024) reviewed the environmental implications while constructing PV cells, who later concluded that construction of PV facilities has led to the improvement of green cover.

Theoretical Framework

A theoretical framework is based on the relevant theory, concepts, and suitable literature incorporated for the particular study. The theoretical framework helps in the critical analysis of the research and paves the way for further developments.

One of the theoretical frameworks adopted for the research article is the Agenda-Setting Theory, which was developed by Dr. McCombs and Dr. Shaw in 1968, which showcases how mass media, including new media, can shape people's thoughts and perceptions about a certain event or an issue. The research paper also takes into account the Social Cognitive Theory, which was developed by the famous Canadian psychologist, Albert Bandura, which describes how mass media can make the respondents take informed decisions about certain issues and initiate behavioural change among them. The research paper also takes into account the psychological theory, Cognitive Theory of Multimedia Learning, which was developed by Mayer and Moreno in 1999. The theory analyses that there are two channels for effective learning-visual and auditory, and the audience can get deeper knowledge if the information is shown as a combination of text and visual graphics. The research paper is also based on the New Media Theory, developed by the renowned Canadian scholar, Marshall McLuhan that shows the effects of digital technology and computer-mediated communication.

3. RESEARCH METHODOLOGY

Research methodology explains how a researcher proposes to carry out their research. It is a logical and systematic approach to solving the research problem. The research paper adopts the qualitative research methodology by adopting the case study method. By adopting this methodology, the researcher aims to investigate the documentary on China's contradictory stand towards using solar energy and fossil fuels like coal for power generation.



Research Gap

After carefully reviewing the available research articles and journals, it is discovered that most Chinese research journals focussed on the assessment, popularity, and impact of solar energy usage across the country, alongside the latest technology developments, indigenous equipment, and related commercial products. But in terms of media representation of harnessing solar energy, not many journals were found covering the same. However, not many journals covered China's policies towards contradicting between solar and fossil fuel energy, which was mostly covered as a priority news story by foreign media, while comparing China's plans with other world countries.

Research Objectives

1. To investigate the reasons behind China's increased interest and large-scale investments in the solar energy industry.
2. To analyse China's efforts and plans to harness solar energy for poverty alleviation.
3. To review the government's plan and its reasons to build more coal power plants.

Analysis and Interpretation

China's Journey to Venture into the Solar Energy Industry Since Time Immemorial

One of the reasons for China to harness solar power is due to the widespread smog conditions that they face every year, causing health issues to its people. So the government invested huge amounts of money to fund the renewable energy R & D, and also introduced subsidies for renewable energy companies to pick up its pace in the market. In the early stage, China was heavily dependent on foreign countries for photovoltaic's raw materials, and the countries' clean energy policies.

The Excerpt from the Interview with Dan Wang, Chief Economist, Hang Seng Bank, China

“When we look at the history of China's solar panel production, and it is very interesting to notice that in the beginning there was no domestic market. It's mostly the European demand that had triggered China's investment in the whole renewable energy sector.”

Despite having a slow start and heavy dependence on foreign countries, the country earned huge profits due to low labour and operating costs, and could build factories for large-scale production.

China's Reasons to Invest in Solar Energy and Green Technology

The Chinese government emphasises on the country's economic growth above anything else, which made them realise the green energy industry, especially the solar panel industry as a profitable business model, which could lead to both economic and environmental development of the country.



The Excerpt from the Interview with Prof. Armin Aberle, CEO, Solar Energy Research Institute of Singapore

“The political system in China still puts economic growth above anything else, including the environment. And so this green energy revolution nicely serves this purpose of growing the economy right and it also creates millions of jobs. So it’s a win-win.”

The Excerpt from the Interview with Tonny Xie, Executive Director, Bluetech Clean Air Alliance (BCAA)

“People see there is a very positive or more confirmed political commitment on this. So this I think encouraged investors to joining this game. Just the past 3 years, we have over 20-10 billion size investment fund established especially for this carbon neutral direction.”

Usage of Solar Energy for Overall Economic Development

The Chinese government has tackled the poverty alleviation programme by asking the country’s private solar companies to install solar panels on rooftops found in rural areas, absolutely free of charge. The villagers ‘lease’ or ‘rent out’ their rooftops to the solar companies, and in turn, receive roof rent from the photovoltaic companies for generating solar power, which is then collected in the grid stations. This scheme was greatly accepted and received more rural participants as it provided extra income for the villagers, which empowered them in the long run.

The Excerpt from the Interview with Prof. He Jijiang, Executive Deputy Director, Research Centre for Energy Transition, Tsinghua University, Beijing. (Translated to English)

“One of China’s signature energy transformation is the extensive development of photovoltaics in rural areas. They are built in the poorest villages and the income generated from the power stations is reserved for villagers to address poverty issues. These photovoltaic companies build the power stations because rural residents have very limited investment capabilities. At the same time, the company will provide roof rent to the people as extra income to improve their lives.”

The Excerpt from the Interview with Madam Li, Yunmengxiang, Xi’an (Translated to English):

“All the electricity generated by the solar panels is sold to the national grid, which makes payment to our village representative committee, which then pays us. Each household income differs since the surface area of panels differ. Every year in January, we also receive a pay-out, so that’s another added benefit. My son is away working, so this is my stream of income. It’s great!”

China’s Contradictory Stand on Building Coal Power Plants

According to the reports of energy data organisations-Global Energy Monitor and Centre for Research on Energy and Clean Air, compared to other countries, China constructs six times more coal power plants, and the approval for constructing the power plants have also quadrupled, despite being the world’s largest producer of renewable energy. Many experts



pointed out that the rising heatwaves and droughts has increased the power demand, with coal being the cheapest and flexible source for producing electricity and with people in rural areas still using coal for heating purposes. That is why the government has criticised the growing dependency on coal and are taking suitable steps, right from grassroot level to address this, by introducing subsidies to convert coal heating equipment to non-coal ones, and so on.

The Excerpt from the Interview with Dan Wang, Chief Economist, Hang Seng Bank (China)

“China doesn’t have good alternative of heating besides coal powered plant, because the clean energy generation is mostly intermittent. They need to have continuous sunshine or continuous wind blowing in order to generate enough of the supply. If you build one more power plant using solar or wind, you almost have to build a separate co power plant in order to stabilise the power supply. So coal power plants in many areas of China is simply a necessity. It’s hard to be replaced.”

The Excerpt from the Interview with Prof. He Jijiang, Executive Deputy Director, Research Centre for Energy Transition, Tsinghua University, Beijing. (Translated to English)

“In addition to photovoltaics, there is a transformation also being carried out widely in China called ‘Coal to Electricity’. In rural China, there are still some families who burn coal to stay warm in winter. Now our government has used subsidies to convert these coal fired stoves into more advanced heating equipment, such as using electricity for heating, including air source heat pumps, electric boilers and other forms. In this way, many rural areas have eliminated the use of coal-fired boilers and stoves for heating.”

4. RESULTS AND CONCLUSION

The study proposes insightful, unbiased, and meaningful implications on China’s vision of a profitable business model in the green energy industry and its reasons behind using coal and other fossil fuels at a larger scale. From analysing the documentary, it is concluded that the video series painted an overall picture of China’s ambitions in investing in the solar industry for profit and overall economic development, by protecting the environment at the same time. With cheap resources and labour cost, the country has tapped the green energy industries’ potential to become the No.1 in the world market, It is also concluded from analysing the transcripts that China is not yet ‘ready’ to become completely green because of its high dependence on coal for powering their air conditioners and coolers, during the heat waves and drought periods, despite the government offering some subsidies to cut down its usage. The documentary also shared light on innovative green technology-solar thermal technology, which is relatively ‘new’ compared to the PV cells that has mostly dominated the solar market.

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