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CHINA, INDIA, AND THE GLOBAL ENERGY TRANSITION

A STRATEGY FOR THE INITIATIVE FOR SUSTAINABLE ENERGY POLICY 2019-2022

The Initiative for Sustainable Energy Policy (ISEP) conducts high-quality, policy-relevant research on energy and environment in emerging economies. Today, ISEP has a major presence in India and a rapidly growing program in China. Drawing on these strengths, by the year 2022:

ISEP will establish itself as a global center of excellence on China, India, and the global energy transition.

ISEP meets this goal by addressing critical knowledge gaps:

- In China, a focus on understanding the country's global footprint.
- In India, an emphasis on state-level energy and environmental policy.
- Between China and India, (i) knowledge transfer, (ii) comparative analysis, and (iii) Sino-Indian collaboration as priorities.

ISEP will address these knowledge gaps with mutually reinforcing activities:

1. Conduct rigorous, policy-relevant research
2. Engage with policymakers and civil society in China and India
3. Inform the world of developments, challenges, and opportunities in China and India
4. Educate the next generation of global leaders in energy and environment
5. Leverage ISEP's premier location in Washington DC to inform policymaking by government and multilateral agencies in the United States

DIRECTOR'S NOTE

In the global energy market, the center of gravity is increasingly shifting to Asia's emerging economies. Among them, China and India stand out as pivotal. Today, China's population of 1.4 billion consume more energy than any other nation in the world. The 1.3 billion people living in India consume far less, but no other country has as much potential for growth. As China and India go, so does the world.

At ISEP, we have decided to make China and India our strategic focus until the end of 2022. ISEP's mission is to produce and disseminate world-class research on energy and environmental policy in emerging economies. A China-India focus reflects that mission, as both countries face immense policy challenges in their quest for a sustainable and prosperous future. What is more, these countries' decisions are pivotal in determining whether the world stands a chance of avoiding dangerous climate disruption. Without low-carbon growth in China and India, our planet will likely become uninhabitable sooner rather than later.

ISEP is in a strong position to inform public discourse and policymaking in and on China, India, and the global energy transition. Our extensive experience with energy and environmental policy in India, where we now have a permanent presence, has always been one of our great strengths. As informed and neutral outsiders, we have played a strategic role in India's energy and environmental policy. We are firmly committed to continuing our robust research and deep engagement in India for years to come.

ISEP's rapid growth in China is a great source of excitement for our team. Over the past year, we have brought to our team a number of top academics and public intellectuals from China. We have also raised funds to conduct ambitious, multi-year programs on important unaddressed questions in China's energy policy. Perhaps most importantly, we have built bridges between China and India by adopting a comparative focus and investing in knowledge transfer. We see China as a key area of expansion in the coming years.

For ISEP, China and India are the future. We will build on our existing strength to expand our research for greater policy impact.

We welcome any opportunities to collaborate, so please write to me directly at JohannesU@jhu.edu if you are interested in joining the ISEP community.

Johannes Urpelainen
Founding Director, Initiative for Sustainable Energy Policy

1. WHY FOCUS ON CHINA AND INDIA?

Today, four out of ten people live in China or India. Under these conditions, China and India more than any other countries shape the planet's future. ISEP is uniquely positioned to explain, understand, and shape energy transitions in both countries.

China is a major investor in almost all types of energy infrastructure: not only in coal and other fossil fuels, but also in clean energy ranging from wind and solar power plants to electric vehicles and transmission grids. China's reach extends outside its borders through major energy infrastructure investments, ranging from coal-fired power plants and oil/gas pipelines to large hydroelectric dams and solar parks, under the Belt & Road Initiative. Due to the dominance of coal in the current energy mix, China is the top carbon emitter. It also suffers from severe air pollution in most parts of the country.

To address the climate challenge, China pledged in the 2015 Paris Agreement on climate change to peak its carbon emissions and to achieve 20% clean energy by 2030. The Chinese government, concerned about extreme smog events in major cities and growing public health concerns, declared a war on air pollution in 2013. A variety of air pollution control policies have been introduced in the past 5 years, including many that target curbing coal consumption and investing more in clean energy.

India will soon claim a leading position in the global energy markets. The International Energy Agency predicts that India will double its current energy demand and become the largest driver of growth to 2040. While such demand growth could contribute immensely to India's quest to end extreme poverty, it might also accelerate climate change when met with fossil fuels. Although India is a world leader in renewable power generation, national energy planners see continued growth in coal-fired power generation. India's energy mix will play a decisive role in meeting the goals of the 2015 Paris Agreement on climate change.

For India, energy is also a critical question for development. Poor technical and financial performance continue to plague the power sector, raising barriers to industrialization and rural development. Hundreds of millions of Indians continue to cook with firewood despite improved access to modern fuels, contributing to deadly indoor and ambient air pollution. Heavily subsidized electricity for irrigation drives unsustainable groundwater extraction, threatening to undermine food security and cause social conflict. Solving these problems and providing sustainable energy for India's development requires policies that are effective and feasible.

2. Research priorities and Engagement for Lasting Policy Impact

- **In China, ISEP will emphasize the country's growing role in the global energy transition.** Chinese energy and environmental policy already benefits from robust domestic policy analysis, and ISEP will fill key knowledge gaps on China's global footprint with neutral and impartial analysis. For the research, ISEP will collaborate with Chinese and international partners. A key priority will be to assess and improve China's outward policies, notably the Belt and Road Initiative (BRI).

- **In India, ISEP will focus on the role of the country's 29 states as engines of a critically important energy transition.** While India's energy and environmental policies are increasingly informed by research and robust debate at the national level, key decisions made in state capitals receive less attention and scrutiny. In collaboration with Indian and international partners, ISEP intends to fill this knowledge gap. Drawing on earlier success in states of Jharkhand and Uttar Pradesh, the Initiative will pay particular attention to forging strong partnerships with organizations that operate in India's 29 states.

- **Between China and India, ISEP will emphasize comparative analysis and knowledge transfer**. China and India have a lot to learn from each other. Although the countries have very different political systems, state-owned enterprises play a central role in both and their governance presents an important challenge for a sustainable energy future. ISEP will conduct comparative analyses of Chinese and Indian policies, and identify opportunities for mutual learning and Sino-Indian cooperation. Moreover, the Initiative will support knowledge transfer and learning between China and India as a neutral and unbiased partner with deep expertise in both countries.

- **Inform the world of Chinese and Indian policymaking on energy and environment.** ISEP will communicate research findings and lessons from China and India to the rest of the world. The target audience includes not only the industrialized countries, but also a wide range of emerging economies that engage with China or India.

3. EDUCATION IN THE NATION'S CAPITAL

- **Educate the next generation of global leaders in energy and environment at the Johns Hopkins School of Advanced International Studies (SAIS) in Washington, DC.** ISEP research and policy engagement contribute to the education of future policymakers and business leaders. Students enrolled in graduate programs at Johns Hopkins SAIS benefit from a cutting-edge curriculum and experiential learning opportunities on China and India.

- **Inform policymaking by government agencies and multilateral organizations in Washington, DC.** Key multilateral organizations, government agencies, and diplomatic missions are within walking distance of ISEP's office. Thanks to its premier location, ISEP can inform and influence key decisions in multilateral agencies and the United States.

- **Convene leading experts to discuss China, India, and the global energy transition.** As a leading research initiative on energy and environment in China and India, ISEP stands ready to convene leaders from business, government, and civil society in Washington, DC, New Delhi, Beijing, and other locations.

About ISEP

The Initiative for Sustainable Energy Policy (ISEP) is an interdisciplinary research program that uses cutting-edge social and behavioral science to design, test, and implement better energy policies in emerging economies.

Hosted at the Johns Hopkins School of Advanced International Studies (SAIS), ISEP identifies opportunities for policy reforms that allow emerging economies to achieve human development at minimal economic and environmental costs. The initiative pursues such opportunities both pro-actively, with continuous policy innovation and bold ideas, and by responding to policymakers' demands and needs in sustained engagement and dialogue.

A unique feature of ISEP is the pragmatic recognition of the administrative, political, and socio-cultural constraints on policy reform. The initiative is based on the premise that the obstacle to energy policy reform is rarely the lack of better alternatives to the current situation, but rather the vexing difficulty of enacting, implementing, and sustaining these alternatives. We adopt a balanced method that considers both sustainability and access to energy crucial priorities, and conduct rigorous research for evidence-based policy advice.

Since its launch in October 2017, ISEP has rapidly established itself as a global leader in the study of energy and environment in emerging economies. ISEP has successfully completed cutting-edge research programs on renewable energy, power sector governance, air pollution, energy access, geopolitics, and the water-energy energy nexus in both China and India.

ISEP's global network of over one hundred leading experts, partnerships with civil society and government agencies, and reputation for excellence in rigorous, policy-relevant research make the initiative stand out as a pioneer. ISEP is deeply embedded in both China and India with local experts, strong collaborators, and deep contextual knowledge.