

The background of the entire page is a photograph of several solar panels mounted on poles in a lush green field. The panels are tilted towards the sun, and the vegetation is dense and vibrant green. The text is overlaid on this image.

Rise to Shine

THE ROLE OF INDIAN RELIGIOUS INSTITUTIONS
IN CLOSING THE ENERGY ACCESS GAP



THE
BHUMI
PROJECT


GreenFaith
Interfaith Partners in Action for the Earth



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INVESTING IN
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ECONOMIC AND STRATEGY CONSULTING



Vasudhaiva kutumbakam

The world is one family

Introduction

The climate crisis demands that the world move away from fossil fuels and adopt renewable energy solutions with unsurpassed speed and at unsurpassed scale.

To date, the Indian government has provided important leadership in adopting renewable energy solutions and moving away from fossil fuels. Its national commitment to installing 175 gigawatts of solar and wind energy by 2022 and its inception of the International Solar Alliance to mobilise technology and finance are two examples of how India is addressing this issue.

However, despite the Indian government announcing in April 2018 that every village in the country had been electrified, over 200 million people in India still lack access to electricity. This energy poverty has devastating impacts on community health, education, and economic growth. Cooking without clean energy inflicts severe respiratory illnesses on countless women and children, causing over 100,000 premature child deaths in India on an annual basis. Without reliable electricity, children cannot study after dark, vaccines cannot be stored, and jobs are not created.

In India, the issues of energy access and climate change are inextricably linked. If the 200 million people in India without access to electricity receive their energy from clean renewable sources, India will make a vital and positive contribution to the struggle against climate change. This report represents a first step in exploring how the country's large and diverse religious sector can play an important role in addressing these two interconnected challenges.

Indian religious and spiritual institutions command significant moral authority and have a large civil society presence. If engaged and equipped properly, they could play a transformative role in ending energy poverty in India. Their potential impact, however, has received very little sustained attention from regional and national governments, the renewable energy, energy access and social entrepreneur sectors, and funders.

Following a 2017 consultation in Mumbai between religious leaders and social entrepreneurs in the field of energy access, in 2018, the Bhumi Project and GreenFaith engaged EPG Economic and Strategy Consulting to conduct a modest, initial survey of the renewable energy efforts of Indian religious and spiritual institutions. The aim was to identify renewable energy efforts and trends in the Indian religious sector, to identify any involvement by Indian religious institutions in the area of energy access, and to determine further research and action steps in these areas.

Over a six month period we researched 30 Indian religious and spiritual institutions, distributed across the country, which had initiated some form of renewable energy and/or sustainability initiative. These institutions were from the Hindu, Islamic, Jain, Sikh and Christian communities, along with a number of non-denominational spiritual organisations. The stories we gathered offer insights on how one of Indian society's most culturally influential sectors can make a far greater contribution to closing India's energy access gap.

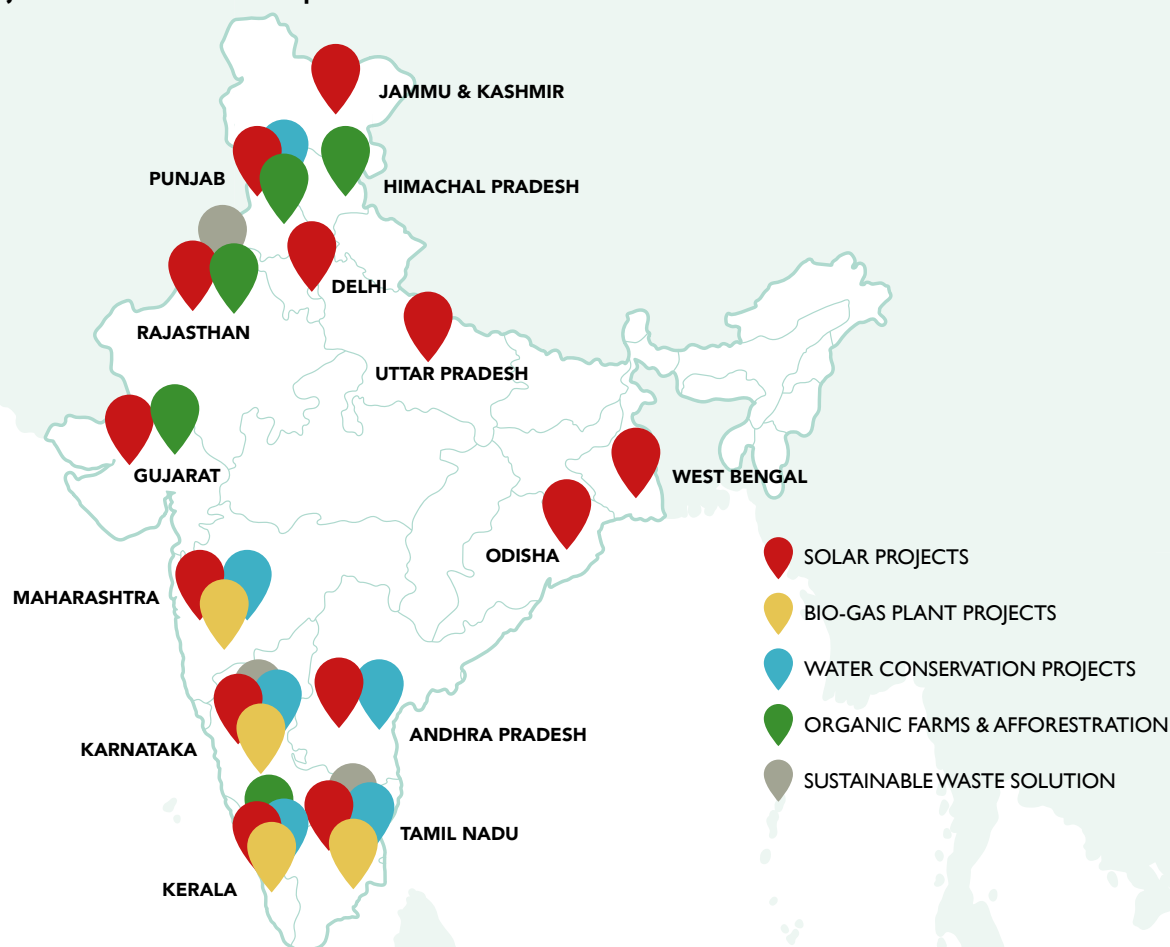


Summary of Findings

This report is a first-of-its-kind look at how Indian religious and spiritual institutions are implementing renewable energy solutions. Its key findings were as follows:

- **Models of excellence exist across the country.** We identified a number of leading renewable energy projects across the country by major religious institutions. These models of best practice and leadership in the sector have been deployed by some of the largest and most respected religious institutions in the country.
- **Renewable energy systems can generate significant savings and displace the majority of religious institutions' fossil fuel use.** The religious organisations which we studied regularly serve more than one million people combined. These organisations save approximately 332,000 kW of energy annually through their use of renewable energy, and have reduced their fossil fuel usage by more than 70%, reducing costs by approximately £1m annually.
- **Cost savings and reliability are prime motivators.** Most institutions decided to install renewable energy systems to save money and to ensure a reliable, uninterrupted supply of energy. Environmental or spiritual/moral factors were not cited as a significant motivation.
- **On-site solar PV is the most common type of renewable energy solution.** The majority of projects were on-site renewable energy installations that helped power the operations of the temple, mosque, church or gurdwara, or that powered the social and community programs that these institutions provide. Among various renewable energy technologies, solar photovoltaic (PV) systems was by far the most commonly utilised.
- **Renewable energy efforts at religious institutions are not networked; best practices are not shared.** Almost without exception, the leaders of the 30 institutions had not spoken to each other or to other religious institutions about their efforts. We found no resources designed to share the successes of these institutions or to empower Indian religious institutions in adopting renewable energy solutions, nor any training or organised effort to support this process.
- **Willing to communicate, but need support.** The institutions we researched were proud of their renewable energy installation, often for the technological prestige which they felt it conferred. They were eager to share the story of their efforts; most lacked the means or sophistication to do so.
- **Most Indian religious institutions have not yet considered how they might address energy access issues.** Very few institutions had considered expanding the scope or ambition of their renewable energy efforts to include a focus on energy access for rural communities, and very few had established any relationship with social entrepreneurs or commercial enterprises in the renewable energy or energy access fields.

Map of India with locations of renewable energy and sustainability projects outlined in this report. Source: EPG.



- **Financing models vary from institution to institution, with no model consistently in use and no mechanism to facilitate scaling.** Some religious institutions relied on charitable or corporate contributions to cover some or all of the cost of their renewable energy system, while others relied on loans or organisational savings. There are no widely used financing mechanisms to accelerate the adoption of renewable energy solutions by Indian religious and spiritual institutions, nor is there guidance available about a spectrum of funding and financing options.
- **Energy access and renewable energy social entrepreneurs are not meaningfully connected to India’s religious sector.** At the 2017 Mumbai consultation, we found that none of the energy access or renewable energy entrepreneurs had an awareness of or strategic relationships with Indian religious networks, NGOs or leaders.
- **Indian religious leaders are not advocating for ambitious governmental renewable energy policies or for increased efforts to close India’s energy access gap.** Due in part to low levels of awareness and education about climate change and the drivers of and solutions to energy poverty, Indian religious leaders are very early in the process of developing a commitment to public advocacy suitable for the Indian context on these issues.

In conclusion, our findings indicate that India’s large and diverse religious sector is at the early stages of adopting renewable energy, and at an even more preliminary stage of addressing energy access issues and advocating for ambitious responses to the climate and energy access crises. The size and influence of this sector means that it has the potential to make an important contribution on these issues in India. However, important work remains to be undertaken.



Case Studies

Jagannath Temple, Odisha

The Jagannath Temple is located in the eastern coastal town of Puri, Odisha. The town is one of the four great pilgrimage sites in India for Hindus (Char Dham).

In 2011, the Indian government's Ministry of New and Renewable Energy (MNRE) sanctioned Rs.5 million (~ US\$ 75,000) for installation of a solar power system to power the temple's lighting system. In 2012, a Kolkata-based solar module-making firm was given a contract to install a 30kW solar power facility on the temple premises. The project was a part of an initiative of the Odisha Renewable Energy Development Authority (OREDA) and helped reduce the temple's dependence on grid-based power.

Golden Temple, Amritsar

The Golden Temple in Amritsar in the state of Punjab is the most revered spiritual site of Sikhism and welcomes close to 100,000 visitors daily.

In 2017, a Mumbai-based business volunteered to donate a solar energy system worth Rs.15 million (~ US\$ 225,000) to the temple through the Punjab Energy Development Agency (PEDA). The solar energy that is harnessed is used in the temple's kitchen for cooking and feeding pilgrims. The installation of this solar powered cooking system has reduced the average daily energy consumption in the community kitchen by 50%.

Badriya Juma Masjid

Located in the Udupi district of Karnataka, the Badriya Juma Masjid is a 100% renewable energy mosque. The building uses a combination of solar and wind power to meet its entire energy needs. The building also features modern elements of architecture, such as a sun-reflecting terrace floor and fitted turbo vents, which offer natural cooling.

In 2016, the mosque was awarded the Platinum award under the specialised category 'IGBC Green Place of Worship' by the Indian Green Building Council (IGBC) of Confederation of Indian Industry (CII), one of India's leading chambers of commerce, in appreciation for its green and energy efficiency design elements.



Recommendations

Conduct further research to identify best practices, funding and financing models, and effective narratives

Additional research is required as a precondition to further develop the renewable energy and energy access efforts in the Indian religious sector.

This research would identify best practices in the areas of:

- *Education and awareness raising*
- *Connecting religious institutions with solutions providers*
- *Financing for deployment and scale*

We suggest a second study to be completed in 2019 which addresses these issues. This study should also include research into effective narratives to engage large numbers of Indian religious institutions in on-site and community-based renewable energy development, drawing upon findings from a study conducted by **Climate Outreach**¹ on climate change communications in an Indian context.

Finally, the study should include a section that seeks to evaluate interest levels among Indian religious institutions in relation to a campaign framework to accelerate their adoption of renewable energy solutions and their engagement with energy access initiatives.

Develop and conduct pilot trainings for religious leaders

Using the findings from the second round of research, we recommend developing training materials to assist religious institutions in adopting renewable energy solutions, and testing these materials through pilot trainings in several regions of India. This process would enable the development of a group of Indian religious and spiritual leaders with a commitment to addressing these issues and the skills and support to do so. The ongoing development and activation of such a group of leaders is fundamental to the meaningful involvement of India's religious sector in addressing the country's climate and energy access challenges.

Convene renewable energy and energy access social entrepreneurs and leaders of religious networks

Finally, we recommend a series of regional convenings that bring together interested leaders of Indian religious institutions with energy access and renewable energy social entrepreneurs.

An agenda would be designed to:

- *Introduce the work of social entrepreneurs in these fields to religious leaders*
- *Identify opportunities for possible collaboration*
- *Build relationships*

1. <https://climateoutreach.org/resources/global-narratives-pilot-project-in-india/>



These consultations should take place in 2019, with the aim of developing recommendations for next steps in 2020 which can be announced in the lead-up to the United Nations climate negotiations that year, COP26. A steering committee with representatives from the religious and social entrepreneur sectors should be identified to advance planning, in collaboration with the Bhumi Project, GreenFaith, and the Shine campaign. If these convenings prove fruitful, they will result in the identification of locations and religious institutions that represent favourable sites for pilot renewable energy and energy access projects which might be analysed for replication or adapted for use in a wider range of communities.

Conclusion

This study identifies key findings in relation to the engagement of India's religious sector in adopting renewable energy solutions and engaging energy access issues. It shows that this sector needs education and training in best practices in order to increase the number of Indian religious sites providing leadership in these vital areas, and provides insights about what the content of that training should be. The study also offers three interconnected recommendations to further the development of leadership by religious institutions across India.

India's religious sector represents a potentially powerful yet under-resourced and under-engaged force for change in relation to climate change and energy access. Supporting the emergence of leaders from this sector who offer a powerful response to these issues, will be of fundamental significance for India for decades to come.



Report Authors

The **Bhumi Project** is a leading international Hindu voice addressing issues related to climate change and sustainable development. It is a joint initiative of the Oxford Centre for Hindu Studies and the US-based non-profit GreenFaith.



GreenFaith is an interfaith environmental organisation. Their mission is to inspire, educate, organize, and mobilize people of diverse religious and spiritual backgrounds globally for environmental action. They are based in New Jersey, USA.



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Shine is a global campaign dedicated to ending energy poverty and unlocking new opportunities for billions of people. Partners from the faith, development, and philanthropic sectors are mobilizing new forms of capital, scaling resources, and generating momentum to achieve universal access to clean, affordable, and reliable energy by 2030 – a Sustainable Development Goal.



Economic Policy Group (“EPG”) is an economic and strategy consulting firm based in London and India, which offers economic analysis, strategic communications, policy advice and market entry assistance with India and East Africa, to businesses and the third sector around the world. EPG works across multiple sectors, including life sciences, healthcare, education, CSR and technology.

You can read the full version of this report online at www.greenfaith.org/bhumiproject/

