



### Editorial

Greetings from a hot and sunny Mount Abu, the spiritual headquarters of the Brahma Kumaris, India. The next wave of coronavirus is circulating around the globe and right now India is having a tough time with the highest daily infection and death rates. The world has many problems such as: corona, climate change and so on and hopefully whilst reading this newsletter you will get some positive inspirations.

I am glad to have the opportunity to share my thoughts in this second edition of our Eco newsletter which is on renewable energy.

My involvement in the research and development of renewable energies started more than 25 years ago at the Brahma Kumaris in Mount Abu. When I first came to India, I quickly realized that renewable energy could play a vital role in helping to meet the energy needs of the country.

India has plenty of sun and our first research project at the Brahma Kumaris centred around solar power for a typical village house and solar cooking for institutions.

Since then we have moved forward, executed many R & D projects and become a recognized research organization with the Ministry of Science and Technology in India.

Two years ago we completed "India One", a 1 Megawatt solar thermal power station. This research project uses 770 paraboloid reflectors of 60 SQM each which were developed in-house

and features an innovative thermal storage for night operation. The reflectors are built as lightweight space frames and follow the sun by automated dual axis tracking. The plant is able to generate heat and power for the BK Shantivan campus around the clock.

As climate change and environmental degradation is moving at high speed, we are all aware that we have to urgently switch to alternate means of power generation. However, one of the major hindrances in the transition to clean energy sources is the question of the storage of energy. All around the world countless research organizations and companies are involved in the race to find the ultimate cheap and reliable energy storage solution. The window of opportunity to introduce such a technology is constantly narrowing as climate change is accelerating and it looks like humanity is somewhat late to change the course of action.

In the latter part of 2021, the UN biodiversity conference in Kunming (China) and the climate change conference (COP26) in Glasgow are scheduled to take place, most likely virtually due to the pandemic. There is a big question mark as to whether these conferences will lead to a breakthrough. To turn things around, we would need nothing less than a paradigm shift. We have to change our habits, our behavior and get rid of greed and egoism.

This is a huge task and that's where a holistic or spiritual worldview can be very helpful. We all understand that any real, lasting change in technology and politics can only happen if we humans fully embrace the change within us. Our thoughts and hearts are at the foundation of our actions. This is where meditation and yoga can contribute in a big way and create the needed momentum for transformation. Climate change and environmental degradation are a sad reality but we can fill our hearts and minds with light, love and hope and share this good intention with everybody and even nature. There is a new understanding emerging that we are all interconnected with nature and that there is a deep relationship between both.

Once we become aware of our full creative potential, each one of us can make a big difference. Let us all join hands and create such an atmosphere of hope and transformation.

***Golo Pilz***

***Adviser to the Brahma Kumaris on Renewable Energies***

## **Solar thermal installations at Brahma Kumaris**



The Brahma Kumaris is a worldwide organisation with representation in more than 130 countries. Its spiritual headquarters is located in Mount Abu, Rajasthan, India, where every year under normal circumstances, more than 1 million people from all over the world come for meditation, residential retreats and conferences. Given the large number of visitors, the energy requirements for all three of the BK campuses are obviously massive. As a socio-spiritual organisation, they were keen to discover a sustainable source of energy that could be used in order to fulfil these

requirements. So it was back in the 1990s that the first experiments began with solar energy, a natural resource which is in abundance in Rajasthan.

The first project was to install a solar cooker in the Academy for a Better World which is one of the campuses up in Mount Abu itself. This was commissioned in 1996 and was one of the first of its kind in the world using 24 paraboloid reflectors of 7.6 square metres area each. Today it is still a fully operational system catering for up to 2000 meals a day.

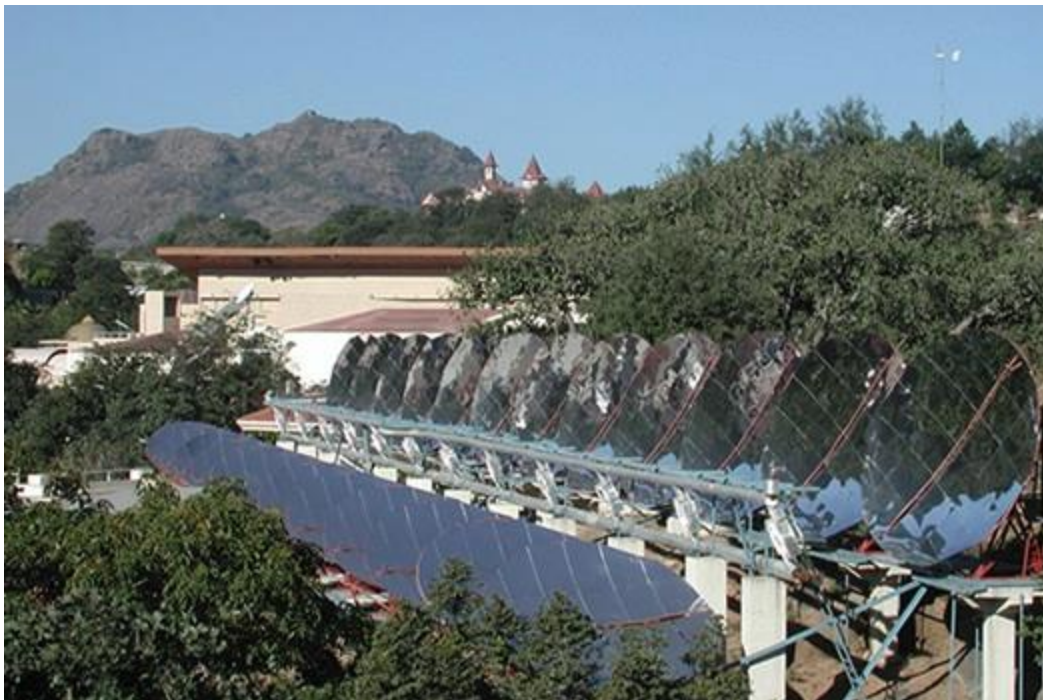
In 1999 an even larger solar cooker was installed at the Brahma Kumaris campus, Shantivan, which is located at the foot of the mountain in Abu Road. The design was improved and this one consists of 84 in-house developed paraboloid dishes, 10 sqm area each. A much larger campus than the two up in Mount Abu, the cooker here is able to cater for up to 30 000 meals a day.

Due to the electricity required to provide for the needs of 25 000 students of the University visiting the Shantivan campus at one time, a very innovative solar power plant with 16 hours storage was designed. The plant named "India One" is a 1 MW electrical Solar Thermal Power Plant. A brand new design was developed consisting of 770 paraboloid reflectors of 60 sqm each, with static focus and 770 corresponding cast iron receivers with integrated thermal storage. It is an ingenious innovation, developed in-house and manufactured with the help of local craftsmen.

India One Solar Thermal Power Plant was commissioned at the beginning of 2017 and has been in use ever since. It is a great innovation for the world of solar thermal power plants because of its storage capacity allowing for 24-hour operation.

The University also uses concentrated Solar Thermal technology for sterilization of medical instruments and laundry at the Global Hospital and Research Centre. This is a hospital with 120 beds, located in Mount Abu. The hospital is proud to serve the local community including the tribal people in and around the

area.



*Research and development of the solar energy programme at the Brahma Kumaris Headquarters in India*



Over the years, the Brahma Kumaris has provided free consultation and demonstrations of their solar technology and this has inspired other groups to develop these kinds of systems for themselves. Groups who have benefitted include NGOs as well as several religious organisations in India, such as Shirdi Sai Baba in Tirupati.

Apart from the solar installation, the University has also planted more than six thousand trees and developed organic & yogic farming in the area which creates good synergy with the plant.

Many experts and well-wishers from India, Germany and other countries contributed significantly to the overall success of the project. Due to the cutting edge research, a substantial part of the project funding was provided by the Indian Government Ministry of New and Renewable Energy and also the German Government Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) via GIZ (a German development agency headquartered in Bonn and Eschborn).

- [Links & Downloads – India One Solar Power Plant \(india-one.net\)](#)
- [Renewable Energy | Brahma Kumaris Environment Initiative](#)

***Prepared by the team of India One Solar Thermal Power Plant.***

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## **Solar Energy and Spiritual Symbolism**

The spring time in the Celtic tradition is called the return of the solar energy when the sun starts to gather warmth and stimulates the new creation within the soil, a process which begins to unfold in January. The Solar energy or the fire element needs to combine with Mother Earth for the creation to be triggered. Solar energy is often seen as a pure masculine energy and in some religions and traditions, the sun is considered to be symbolic of the supreme cosmic energy or God and is often portrayed as a father figure or male deity. Thus it is a balance of both the masculine and the feminine energies that are needed for the new growth to take place.

When we look at society today it is difficult to find a synergistic balance of these two energies. Instead, it is a particular form of the masculine energy that tends to dominate. This is the world of striving, busyness, of information rather than wisdom, of achievement and power. These are the values that tend to be promoted in our materialistic society. They are often seen as the mark of success and the means to happiness, albeit often short-lived. But what is missing is the balance of this dominant masculine energy with the feminine: the spirituality, the 'beingness', the connection with the inner being, with God and with one another.

On the whole, nature is perceived as feminine and those of you who speak gendered languages will know this. In French, nature is **la** nature for example. What can we learn by observing nature? From the natural world, we can certainly learn the art of stillness, endurance, perseverance and growth. Nature teaches us how to just 'be'. William Wordsworth said, "Come forth into the light of things, let nature be your teacher". Nature is indeed a great teacher. The persistent dominance of the impure

masculine energy is perhaps why the feminine is consistently abused. This happens in relation to women in societies all over the world but also in relation to Nature which has, as we know, been plundered and abused consistently for decades in the name of progress.

*The importance of inner balance for restoring a harmonious relationship with nature.*



Within the teachings of the Brahma Kumaris, it is understood that the original nature of the soul is a perfect balance between the masculine and feminine qualities; however in a world which is so conditioned and polarised by gender, we easily lose that inner balance. The founder of the Brahma Kumaris, Brahma Baba was ahead of his time when, in the late 1930s, he put the administration of the community into the hands of a group of young women. Recognising the dominance of the masculine in society, he felt that it was especially the feminine energy of nurturing and caring that was needed to restore the balance. Henceforth, the organisation has always been led by women.

But to restore balance to the world and to create a harmonious relationship with Nature once again, starts not just within organisations but within the self. The prime tool of spiritual development taught by the BKs is meditation and this is seen as a means of connecting to the Divine. The Divine or God is considered to be a being of light, like the sun, but we are encouraged to relate to this being as both the Mother and the Father. This enables each soul to develop the full range of virtues and powers needed to deal with the challenges of today's world and also to create a better, more balanced world in the future.

References:

- Ian Siddons Heginworth; Environmental Arts Therapy and the Tree of Life, Spirit's Rest, 2009
  - J. C. Cooper, An Illustrated Encyclopaedia of Traditional Symbols, Thames and Hudson Ltd, 1978
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## Solar Power in Tanzania



*Just one of the many countries in which solar power has created a cooking revolution. ([Image source](#))*

Women and children, mostly girl children, supply the household cooking fires with wood in many countries, like Eritrea and South Africa. They often have to walk several miles to find fuel for their cooking stoves. This leaves them open to being raped or even killed as they go on their long journeys to find biomass to burn, mostly wood and dung. The smoke of course creates pollution but the fires are also terrible for the women and girls who have to tend them, as they end up breathing in the smoke and sometimes they get burns and lung ailments. The average household in Tanzania burns 3.6 tons of wood a year. Wood smoke causes many breathing and heart diseases, especially for vulnerable infants and children not to mention the adverse effects on the planet. Using a solar cooker can be a good solution to alleviating these problems.

A solar cooker is a device that is able to cook food by just capturing direct sunlight. This simple technique involves collecting sunrays and absorbing them in black cookware to maintain and achieve temperatures required for cooking. There are 3 basic types of solar cookers: reflective panel cooker, a box oven cooker and parabolic cooker. Solar cooking is easy, efficient, safe, economical and a sustainable way to cook food.



Thanks to the [Solar Cookers International](#) (SCI), women in rural Tanzania save 2 bundles of firewood per week each. SCI is a non-profit organisation based in the US since 1987. They are leading the solar cooking sector by partnering with collaborators in over 135 countries. Their mission is to improve human and environmental health with solar cooking and this is achieved in three ways - advocacy, research and capacity building. One example of their capacity building is where they educate local women to teach other women in the area to use solar technology. There are so many advantages of solar cooking. As we have seen, It has incredible environmental, health and economic benefits. The women report feeling healthier and that they save as much as 35% of their fuel expenses. To learn more about Solar Cookers International and their work watch [this](#).

Another initiative [Solar Sister](#), a non-profit based in Tanzania and Nigeria is also doing similar work in rural communities of several sub-Saharan African countries. The group in addition to the cookers also encouraged the adoption of other cheap solar-powered equipment, such as portable lamps, fans, and phone chargers. Solar Sister recruits women identified as community leaders by local partner organizations and trains these women to sell the solar technology themselves thereby enhancing the reach and permanence of the project's impact.

"If you want to spread information quickly, use women, that's what we believe here," Fatma Muzo, Tanzania Country Director for Solar Sister.

For more information about Solar Sister and their projects watch [this](#)

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## Rise to Shine



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 GreenFaith. Their latest report, authored in partnership with GreenFaith, the Shine campaign and EPG Economic and Strategy Consulting, looks at the role of Indian religious institutions in closing the energy access gap.

*Contribution from the Indian religious organisations to closing the energy access gap. [Image source](#)*

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

To know further read here - [new.greenfaith.org](http://new.greenfaith.org) [Bhumi Project](#)

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## Meditation



[Image source](#)

These meditations were recorded to inspire and establish a positive connection with nature and the elements of matter: earth, air, water, fire and ether.

Click here for [Inner energy to be in harmony with nature](#)

For more meditations, please click [here](#)

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