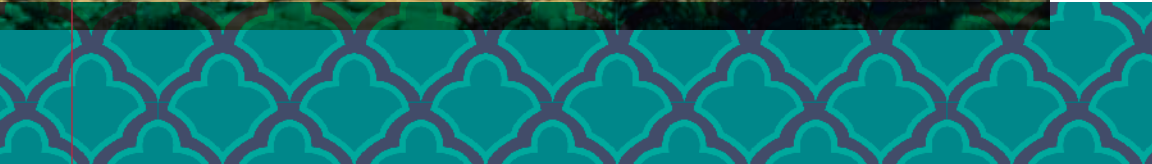
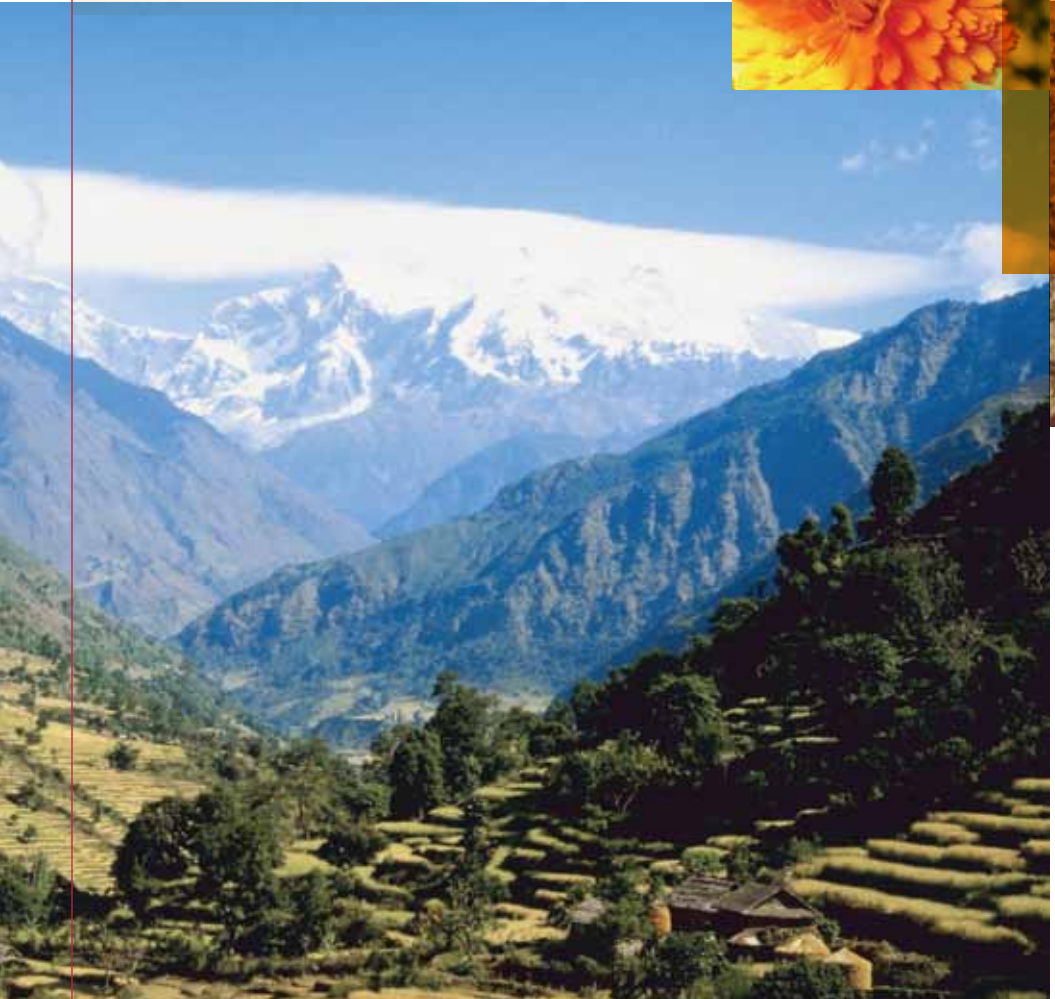


Vishnuprayag Vision: CARBON & COMMUNITY



High in the Himalayan mountains of Northern India, the state of Uttarakhand is harnessing the raging waters of the Alaknanda River to power homes and businesses with clean energy. More than keeping the air clean, the Vishnuprayag Hydroelectric Project also brought much-needed economic development and enhanced social programs to the region and, as a result of the project the local communities have a much better quality of life. Making all this happen is the Jaiprakash Group – and carbon finance from Cargill.

The History

The state of Uttarakhand lies far from the bustling Indian commercial centers of Mumbai and New Delhi and its underdeveloped economy is centered on agriculture and tourism, but these populations share one thing: a thirst for power.

More than a decade ago, state power officials identified the need for more electricity in Uttarakhand. Lack of electricity supply was impeding economic development and social wellbeing, and the shortfall was expected to get increasingly worse.

Local officials in this region are also sensitive to the environment. They sought to avoid fossil fuel-powered generation if possible, but had difficulty raising private capital to fund an electricity project powered only by the flow of water down from the heights of the Himalayas, for the idea of the project was conceived in 1965 but could not be developed for lack of funding.

One of India's most established business groups, the Jaiprakash Group and its subsidiary Jaiprakash Power Ventures Ltd. was awarded the mandate to build just such a power station on the Alaknanda River.

The envisioned Vishnuprayag Hydroelectric Project would include four 100 MW turbines in a run-of-the-river power plant that would be emissions free. However, private financing was difficult to achieve. The project only took off when the company turned to the global carbon markets to raise the finance needed to build the project.

More than 70% of the region's power is generated using fossil fuels, but building Vishnuprayag would displace the need for carbon-intensive generation – thus creating carbon offsets or credits. A division of the Cargill Corporation stepped in to buy the carbon credits, providing much needed capital.

Vishnuprayag is now a reality, harnessing the steady waters of the Alaknanda River and generating low-cost, emissions-free electricity for the surrounding communities in Uttarakhand. Most importantly, unlike other large hydro projects Vishnuprayag did not displace local citizens or disrupt communities. On the contrary, lives in the surrounding community have changed dramatically for the better – social programs are alleviating poverty, protecting the environment, building schools, roads, housing, and building health centers. Vishnuprayag is a sustainable success story well beyond the carbon markets.



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Here is the story...



Carbon Reductions

The Vishnuprayag Hydroelectric Facility, owned and operated by Jaiprakash Power Ventures Ltd., generates 400 MW of emissions-free electricity for the citizens of Uttarakhand in Northern India. This project is uniquely sustainable, creating carbon credits to fight global warming, while also supporting the communities most local to it.

Carbon Reductions

Vishnuprayag is a run-of-the-river hydroelectric facility generating electricity from four turbines of 100 MW each. Power is generated through renewable sources of energy and therefore reduces anthropogenic greenhouse gas emissions that would have been created to supply power to the local Northern India power grid using fossil fuels. Currently, more than 70% of power at the northern grid of India is generated using carbon-intensive fossil fuels.

Demand for electricity in the region often outstrips supply and is increasing each year. The operation of Vishnuprayag and the feeding of its electricity output into the local power grid displaces fossil fuel generation and decreases the future needs for coal-based power in the

state of Uttarakhand. Based on methodologies established by the United Nations Framework Convention on Climate Change (UNFCCC) and verified by an independent third party auditor to Voluntary Carbon Standard (VCS) 2007 standard, the project is projected to save the emission of 1.32 million tonnes of carbon each year.



Run-of-the-River

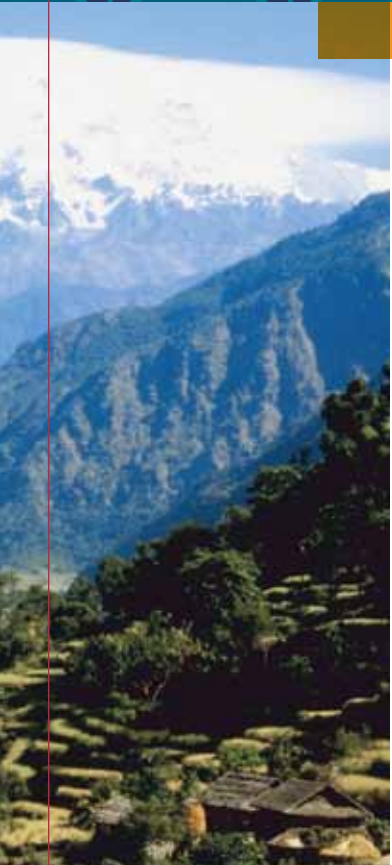
The generation of electricity from renewable sources, such as the use of water, reduces atmospheric concentrations of greenhouse gas emissions. However, the Vishnuprayag Hydroelectric Project further protects the environment by using run-of-the-river technology, which does not carry residual impacts on the local environment or population.

Vishnuprayag generates electricity using only the unimpeded and powerful force of the Alaknanda River, which is supplied by waters originating high in the world's tallest mountain range, the Himalayas. Jaiprakash Power Ventures did not build storage dams upstream or downstream of the power facility, which might have displaced local citizens or caused damage to the local ecosystem as in so many other large hydro projects. The river runs through Vishnuprayag's underground power station turning efficient, modern turbines to generate electricity provided to the surrounding communities and the regional power group.

VISHNUPRAYAG HYDROELECTRIC PROJECT OVERVIEW

Project Type	4 x 100 MW Run-of-the-River Hydroelectric Power
Generation Technology	Impulse-type Pelton Turbines
Power Allocation	12% free power to Uttarakhand; 88% power to Uttar Pradesh Power Corp.
Project Operator	Jaiprakash Power Ventures Ltd.
Location	River Alakanda, District Chamoli, Uttarakhand
Host Party	Government of India
Carbon Credits (per year)	1.32 MM tCO ₂ e [verified emissions reductions (VERs)]
Carbon Credits Owner	Cargill Corporation





Sustainable Benefits

“Community-driven and community-owned conservation.”

More than just a hydropower plant and more than just a carbon credit project, Vishnuprayag is a true contributor to sustainable development for local communities in Northern India – and beyond.

Jaiprakash Power Ventures’ community-oriented approach to Vishnuprayag is pioneering in its broad outlook on environmental protection and its distinct focus on social well-being. Alongside the building of the hydroelectric facility, the company chose to build up the livelihood of the surrounding rural communities and preserve gains for future generations by encouraging their participation in the conservation of biodiversity. It’s all wrapped up in the focus of each member of the Vishnuprayag team: “community-driven and community-owned conservation.”

Environment

By reducing heat-trapping gases that cause global warming, the project itself benefits the populace of Uttarakhand. Climate change could drastically impact the ecosystem of the Himalayans, and Vishnuprayag is one means of protecting it.

In addition, Jaiprakash has invested in projects to protect the region’s biodiversity through afforestation, soil conservation, water recharge, and eco-restoration. The company created two botanical nurseries and supported agricultural programs in the region to spur local commerce. Much of the food grown here is used to sustain the local communities. They also repaired scores of streams. Today, the local communities are reoriented more toward their environment – and have the tools to conserve it.

Economy

The area around the Vishnuprayag project lacks in basic infrastructure such as water, roads, medical facilities, and electricity. Jaiprakash’s involvement in the project brought much-needed investment to the region, building roads, providing a reliable source of power, improving access to water and medical services. The project also employed nearly 4,000 during construction and now contributes more than 350 jobs during operation. The base is now established for further development of conservation commerce and local job growth.



Vishnuprayag’s perhaps most lasting impact on the villages surrounding the Alaknanda River will be in its social development programs.

Social

In a remote region still struggling to develop infrastructure to support its population, the project built health centers in both Marwari and Lambagarh. These provide vital medical care to a majority of families in the region. More than 300 villagers each month are treated there. Jaiprakash has contributed to construction of elementary and secondary schools in Lambagarh Village as well as nearby Pandukeshwar and Joshimath.

The project has also created an innovative Community Development Program to lift the population out of poverty. These programs are centered on the environment, creating lasting industry and eco-restoration jobs in plantation, soil conservation, and wildlife management. Jaiprakash established a snowline nursery to develop and conserve local medicinal herbs, as well as support agriculture and horticulture work through line agencies.

Vishnuprayag’s perhaps most lasting impact on the villages surrounding the Alaknanda River will be in its social development programs. Scores of local women meet under Vishnuprayag project-sponsored village micro-planning programs, which serve as forums to develop skills, introduce new technology and create new wage jobs from agriculture and eco-restoration work.

ENVIRONMENT	SOCIAL	ECONOMIC
36 km of Roadside Plantation	Construction of Health Clinic in Marwai	Direct Job Creation (Construction): 3600
70 ha of Forest Plantation	Construction of Health Clinic in Lambagarh	Indirect Job Creation (Construction): 225
Creation of Two Nurseries	Construction of schools in Pandukeshwar, Lambagarh Village, and Joshimath	Direct Job Creation (Operation): 300
Repair of 32 Streams	Construction of Chandika Temple in Ravigram	Indirect Job Creation (Operation): 50
Soil Conservation Programs	Village Micro-Planning at 30 sites involving 15,000 women	Infrastructure: Electricity
Improved Agricultural Practice		Infrastructure: Roads
		Infrastructure: Water Construction of Irrigation Tanks in Rural areas



About Cargill

Cargill Incorporated is a privately held, multinational corporation, and is based in the state of Minnesota in the United States. It was founded in 1865, and has grown into one of the world's largest privately held corporations with 159,000 employees operating in 68 countries. In fiscal year 2009, Cargill reported net earnings of \$3.33 billion on sales and other revenues of \$116.6 billion. Cargill's carbon related operations are committed to making the world's environment cleaner, while at the same time delivering strong financial returns. Due to its traditional focus on commodities investment, Cargill has become a leading investor in the environmental and commercial opportunities created by a low carbon economy. Whether you want to fulfill corporate greenhouse gas reduction targets, gain carbon market experience, prepare for potential regulatory requirements, enhance your brand image or attract new investors, Cargill will help your organization achieve its goals.



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