A Sustainable Shift in Service: Akshaya Patra and BW LPG India Collaborate in Puri

Category: Business
written by International Khabar | April 28, 2025

At The **Akshaya Patra Foundation**, every wholesome meal served is a step toward enabling education and building a healthier, brighter future for children. Our journey in Puri, Odisha, has taken a meaningful leap towards sustainability through a valued partnership with **BW LPG India**, India’s largest owner and operator of Very Large Gas Carriers (VLGCs) for liquefied petroleum gas (LPG) shipping. The company is committed to deliver cleaner energy for a sustainable future and proudly supports related community initiatives.

BW LPG India fuels Akshaya Patra's Puri kitchen with clean LPG for a greener future

Background

Puri is not just a pilgrimage hub; it is a city that balances deep-rooted spiritual significance with modern environmental consciousness. Known for the revered Jagannath Temple, the city has also embraced eco-friendly initiatives-making it an ideal place for sustainable innovations in community service.

Akshaya Patra in Puri

In Puri, Akshaya Patra began its operations in 2006 driven by the vision No child shall be deprived of education because of hunger. Today, the Puri kitchen provides nutritious mid-day meals to nearly 40,000 children studying in 583 government and government-aided schools in the city and surrounding areas, by supporting the PM POSHAN Abhiyaan, our meals play a pivotal role in improving children's health, school attendance, and learning outcomes.

The centralised kitchen provides hygienic, nutritious and freshly prepared mid-day meals daily, playing a vital role in improving school enrolment, attendance and retention as well as children's health outcomes, and consequently, their academic performance.

Akshaya Patra – BW LPG India Partnership

Akshaya Patra has initiated a strategic shift towards becoming more environmentally sustainable, and in this, the Foundation has had the considerable support of donors like BW LPG India, who have supported its operations in Puri, Odisha. In line with Akshaya Patra's sustainability commitment, the Puri Centralised Kitchen, which prepares over 52,000 meals daily, transitioned from a briquette-fired boiler to a liquefied petroleum gas (LPG)-fired boiler with the support of BW LPG India. This move not only optimised operations but also brought significant environmental, community and cost-related benefits. BW LPG India leadership team adds, "We are committed to the communities in which we operate, and we are proud to continue our partnership with Akshaya Patra Foundation to sponsor the energy needs of school kitchens with clean-burning LPG-fuelled equipment, reinforcing our firm conviction in delivering energy for a better world".

Mr. Dhananjay Ganjoo, Chief Marketing Officer of The Akshaya Patra Foundation, shared, "*At Akshaya Patra, we believe that true service must go hand-in-hand with sustainability. Our collaboration with BW LPG India is a shining example of how thoughtful innovation can nourish both people and the planet. By reducing our environmental footprint while enhancing meal delivery for children, we are building a healthier future-one meal, one initiative at a time.*"

Impact – Energy Transition at Akshaya Patra Puri Kitchen: Briquettes to LPG-fired Boiler

Before – Challenges with Briquette-fired Boiler

1. **High Fuel Load, Lower Efficiency**

- Daily Briquette Usage: 1,650 kg
- Calorific Value: ~3,800 kcal/kg → 6.27 million kcal/day
- Combustion Efficiency: ~65%, leading to thermal losses and higher input fuel needs

2. Particulate Matter & Pollution

- Briquettes emit high levels of PM2.5, soot and CO, leading to poor air quality inside the kitchen and surrounding area
- Persistent community complaints and pollution board concerns due to black smoke and ash

3. Manpower & Maintenance Overheads

- Manual fuel feeding, slag removal, and cleaning required extra labour and caused frequent boiler downtime
- Ash handling created hygiene issues near food processing zones

4. Operational Cost

- Cost/kg: Rs. 8.50 → Daily Cost: Rs. 14,025
- Requires large dry storage and handling areas for 1.6 tonnes/day

After – Benefits of LPG-fired Boiler Upgrade

1. Higher Thermal Efficiency

- LPG Calorific Value: ~11,500 kcal/kg
- To meet 6.27 million kcal/day, only 545 kg LPG/day is

required

- Combustion Efficiency: ~95%, providing faster and cleaner steam generation

2. Clean combustion, Air Quality & Hygiene Improvement

- LPG combustion emits almost zero particulate matter, soot or ash.
- Drastically reduced kitchen emissions enhanced air quality for kitchen staff and the local community
- Compliance to the Government's regulations of lowering air pollution as Puri is a place of importance from the pilgrimage and tourism perspectives

3. Manpower Savings & Easy Operation

- Automated burners and no ash to handle = ~30-40% manpower reduction in Fuel handling
- Lower downtime and safer operations

4. Low Capex & Minimal Maintenance

- LPG systems are modular and skid-mounted, requiring lower upfront investment
- No moving grates, conveyors, or soot blowers-maintenance costs dropped significantly

Carbon Footprint Reduction (235 Operational Days)

Parameters	Briquettes	LPG
COâ□□ Emission Factor	~1.8 kg COâ□□ per kg	~2.88 kg COâ□□ per kg
Daily Usage	1,650 kg/day	545 kg/day

Daily COâ□□ Emissions	2,970 kg COâ□□/day	1,569.6 kg COâ□□/day
Annual COâ□□ Emissions	699,950 kg	368,856 kg
Approx. Annual Emissions	~700 tonnes/year	~369 tonnes/year

Net Carbon Emissions Reduction

Parameter	**Briquette Boiler**	**LPG Boiler**
Fuel Used (per day)	1,650 kg	545 kg
COâ□□ Emissions/Day	~2.97 tonnes	~1.57 tonnes
Annual COâ□□ (235 days)	**~700 tonnes**	**~369 tonnes**
Net COâ□□ Reduction		**~331 tonnes/year**

Comparison b/w Briquettes and LPG from an Operational Perspective

Criteria	**Briquettes**	**LPG**
Emissions	High PM, CO, smoke and ash	Clean burning; negligible PM
Compliance Risk	High (Visible emissions)	Low (Meets CPCB standards)
Community Impact	Negative (Smoke, particles)	Positive (No visible emissions)
Capex	Higher (Fuel handling + storage)	Lower (Compact skid-based units)
Maintenance Frequency	High	Low

Operational Ease	Manual, labour-intensive	Automated, easy to manage
Hygiene	Compromised due to ash/smoke	High standards, no residue

This transition marks more than a technological advancement-it is a model for scalable, CSR-led environmental innovation that improves operations, empowers communities, and enhances the well-being of school children.

Together with BW LPG India, Akshaya Patra reaffirms its mission to serve nutritious meals while championing sustainability, community health, and national development goals.