



A Clean Fuel to Boost Incomes

Compressed natural gas has been around since the 1980s. Through an ADF-supported project, it has finally taken off in Dhaka, Bangladesh.



Dhaka - As with other big cities in Asia, Dhaka suffers from high levels of pollution, much of it caused by vehicular traffic. This teeming city of more than 10 million people has roads that are noisy and busy, filled with buses, cars, "auto rickshaws," cycle rickshaws, and trucks.

Yet Dhaka in recent years has managed to cut pollution down drastically. Measured in particulate matter, pollution came down about 60% between 2001 and 2004, said Abdul Wadud, Managing Director, Rupantarita Prakritik Gas Company Limited (RPGCL).

RPGCL can certainly take some of the credit for this. The company was charged with introducing compressed natural gas (CNG) in Bangladesh and making this environmentally friendly fuel readily available for use. To this end, RPGCL has opened CNG filling stations and set up conversion workshops for vehicles so that they can switch to CNG. The company has also helped to convert many of Dhaka's smoke-belching buses to "green" vehicles using CNG, which is much kinder to the environment than the traditionally favored fuel: diesel.

"There has been a tremendous improvement since CNG was introduced on the streets of Dhaka," Abdul Wadud said.

Buses are the only means of mass transport in Dhaka, which does not have a light rail or subway system. Buses and auto rickshaws are the cheapest modes of motorized transport and are favored especially by the poor. About 1,400 buses now use CNG, making a tremendous difference to air quality in Bangladesh's capital city.

Higher Incomes

All of Dhaka's 25,000 auto rickshaws now run on CNG, which is much cheaper than petrol or even diesel. Three-wheeler auto rickshaws running on CNG were imported from India to replace those running on two-stroke engines, which emitted a lot of heavy smoke. This has given the people of Dhaka a new word: CNG, which on the street almost always refers to an auto rickshaw rather than to the gas itself.

Given the lower cost of running a vehicle on CNG, conversion raises incomes markedly for owners and drivers alike. The owners recoup the cost of converting to CNG by raising the rent that the drivers pay. The drivers do not mind because they still make much more profit than they did when the rickshaws ran on diesel.

Mohammad Nasimuddin, 60, has been driving auto rickshaws for 15 years. He pays daily rent for the vehicle plus the cost of gas, then keeps the rest of his earnings. When the owner of the vehicle switched to CNG some years ago, Nasimuddin's rent increased fourfold - and yet his profit shot up from 150 taka to 400 taka (about \$2.20 to \$5.80) a day! This is mainly because his fuel costs have come down from 300 taka to 70 taka a day.

"Earlier, I made at best 200 taka a day after paying for the fuel, and paid 50 taka to the owner as rent for the vehicle," Nasimuddin explained. "Now, I earn 1,000 taka a day after gas and give the owner 600 taka - that still leaves 400 taka for me and my family."

Life is still hard for Nasimuddin's family of four, but it is certainly better than before, he said. "We can buy more food, and if we can eat better, that's enough," he added.

Much Less Smoke

Nasimuddin, who started life pulling a cycle rickshaw, has seen many changes on the streets of Dhaka. Since the introduction of CNG, he has seen a noticeable reduction in pollution.

Before the introduction of CNG, the pollution was really bad, he said. Since the auto rickshaws are open on the sides, their

drivers are particularly vulnerable to the effects of pollution. "My eyes and face would burn and I would fall ill very often. I would continue to work, but I'd feel ill," Nasimuddin said. "But now I don't have that problem. There is much less smoke now."

The low cost of CNG makes this an attractive option for private vehicles too, especially as oil prices continue to rise. There are more than 80,000 private cars and jeeps running on CNG, as well as 12,000 taxis.

The very popularity of CNG, combined with greed, has given rise to an unforeseen and very serious problem. The Daily Star, a Dhaka-based newspaper, reported recently that substandard CNG cylinders were being made in some unauthorized workshops in the city. These cylinders are sold cheaply, but extract a deadly cost if they blow up under the pressure of the gas, which they are not built to withstand.

Abdul Wadud of RPGCL pointed out that CNG is perfectly safe so long as people use authorized workshops to convert their vehicles. RPGCL ensures the requisite quality in the vehicles it converts. The company also runs some of the 72 workshops in Dhaka that are authorized to convert private vehicles.

An Idea Whose Time has Come

To counter the use of dangerous unauthorized cylinders, RPGCL has started putting out advertisements warning people that they are unsafe. Under the ADB-supported project, RPGCL has engaged a consultant to run a public awareness program to inform the public of the need to use only authorized workshops for conversions.

Those who follow this advice reap impressive benefits. "I save a lot of money," said Shahidul Islam Khokon, a 36-year-old film director who converted his car to CNG about 6 months ago. The conversion has brought some problems, he said, affecting the car's pick-up for example. But the savings make it worthwhile.

Mohammad Jehangir Alam works at a CNG filling station and conversion workshop run by RPGCL. The workshop opened in 1984 to convert government cars to CNG, but in 1990 it was opened to all vehicles. "The demand for conversion is increasing," he asserted. "Last month, we converted an average of 4 vehicles a day. We convert cars, jeeps, microbuses, buses."

The idea of CNG conversions is not new. It has been around since the early 1980s. But it is only now seen as an idea whose time has come. "It took 20 years to convince people that CNG is economic, it is safe, and it is replaceable," said Abdul Wadud. But it is finally done.

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