

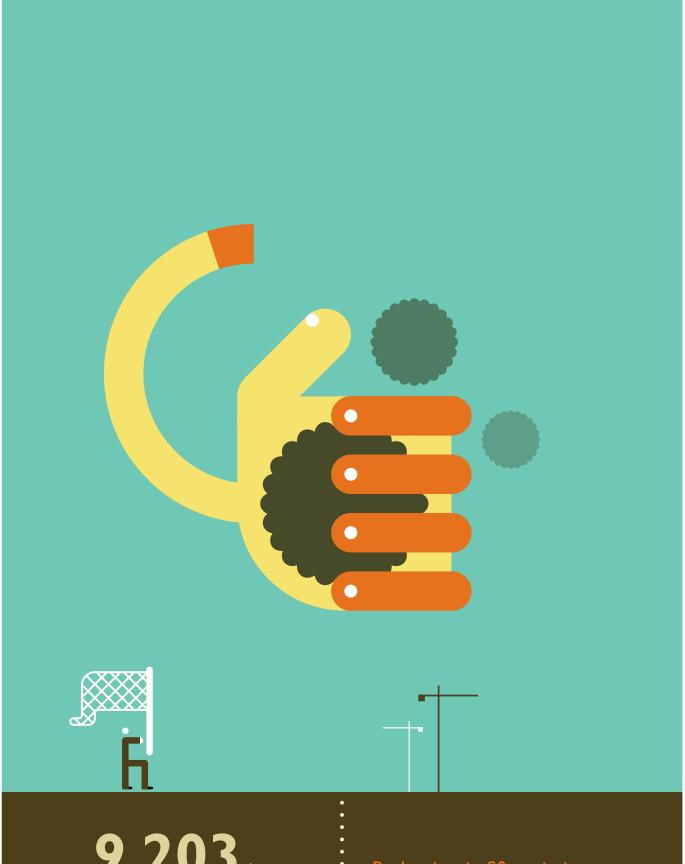
"Going forward, we are doing our utmost to light the way for all of our customers in an ever-greener marketplace."

**Tso Kai Sum**Group Managing Director

At HK Electric, 2009 was a year of consistency and stability. Consistent with our past performance, the reliability of our power supply remained at excellent levels. Coal prices, which in the previous year experienced record volatility, stabilised in 2009. Due to reliable gas supply and successful commissioning of the Stage I Emission Control Project, we were able to reduce emissions from the Lamma Power Station and out perform set targets.

While industries worldwide attempted to recover from a severe economic downturn in 2009, HK Electric continued to venture out and invest outside Hong Kong. Looking to neighbouring Guangdong, our acquisition of interests in power stations gave us a strategic stake in the electricity generating business in mainland China.

Consistency and stability remain hallmarks of our organisation. For more than a century, we have been lighting up the streets, homes and businesses of Hong Kong. In recent decades, we have also taken that service outside of Hong Kong by investing in energy companies throughout the world. Going forward, we are doing our utmost to light the way for all of our customers in an ever-greener marketplace.



9,203 tonnes

Reduction in SO<sub>2</sub> emissions

Hong Kong operations

### **Generation**

With HK Electric's power generation centred on Lamma Island, the Lamma Power Station (LPS) and Lamma Winds have a total installed capacity of 3,736MW, comprising eight coal-fired units, five gas turbine units, two combined cycle units and one wind turbine.

Owing to the increased use of natural gas and optimal operations of our units, we saw our overall thermal efficiency improve in 2009 to 36.2% while the reliability of these units was the highest since 1994, with a forced outage rate far below 1%.

Through our efforts on several fronts in 2009, we were able to meet the emission caps imposed by the HKSAR Government. A reduction in the emission of sulphur dioxide, nitrogen oxides, and respirable suspended particulates from LPS meant that we outperformed emission allowances set by the Government.

Our improved performance was due to the successful commissioning of the Unit 5 Flue Gas Desulphurisation (FGD) Plant and Low Nitrogen Oxides (NOx) Burner System, an increased consumption of natural gas, and a lower sulphur content of the coal supply, as well as our prudent operations and maintenance.

### FGD and Low NOx Burner

In July 2009, we marked the completion of the first of a two-phase emission reduction programme at LPS with the commissioning of an FGD plant and a Low NOx Burner system for our coal-fired generating unit L5.

Four of our coal-fired units are now equipped with FGD plants and Low NOx Burners. Retrofit works are in progress

to install two more FGD plants and one more Low NOx Burner, scheduled for completion in the first half of 2010.

# Natural gas and coal supply

Increased generation by natural gas helped us meet EPD emission caps in 2009. In terms of units sent out, electricity from natural gas increased to 20% from 17% in 2008, and it will increase further to 30% in 2010. In preparation for this rise, additional gas was secured in August 2009.

Coal-fired generation units remained the primary source of electricity from LPS in 2009, but the quality of coal improved due to our staff ensuring the quality control aspect of the coal supply at the mines, loading ports, independent laboratories, and in Hong Kong. The sulphur content of the coal dropped significantly because of coals that were sourced from Australia and Russia.

### Lamma Winds

In 2009 we saw the annual generation of our 800 kW wind turbine at Tai Ling of Lamma Island surpass one million units of electricity for the first time.

### Plant management

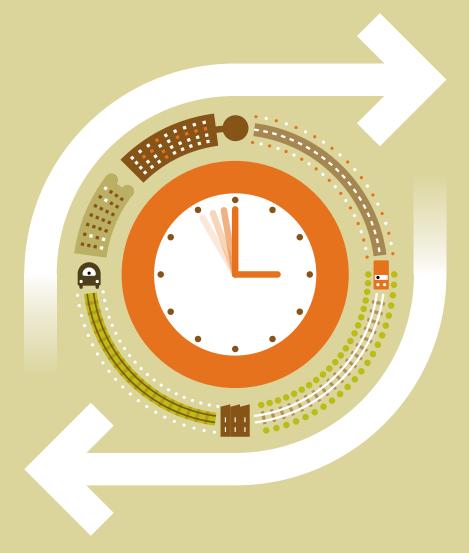
Prudent operations and maintenance of LPS have produced exemplary safety and conservation records. Since the introduction of natural gas in 2006, the operations have been satisfactory. Moreover, teams and individuals from the Generation Division have won several local and regional awards in 2009 for their safety knowledge and practice. Conservation of resources has also been a top priority among management and staff. Among other examples, we collected 167,700 m³ of wastewater and rainwater for reuse, as well as using 20,792 MT of ash for reclamation and land formation at our Lamma Extension site.



The Lamma Power Station and Lamma Winds have a total installed capacity of 3,736MW.



An FGD plant and a Low NOx Burner system have been installed for the coal-fired generating unit L5.



T

99.999%

Supply reliability to our customers

### Transmission and distribution

2009 was another satisfactory year for our transmission and distribution operations. We achieved or surpassed world-class service targets in both supply reliability and power quality through well-planned maintenance of equipment and careful monitoring of the operations. To cope with the steady growth in customer base, we continue to upgrade and expand our supply network.

## Outstanding reliability

In 2009, our supply reliability was over 99.999%, a record which we have consistently maintained since 1997 and which surpassed the pledged service standard of 99.998%. Our power quality was also superior by world-class standards.

### Asset management

Apart from pursuing a stringent maintenance programme in accordance with our PAS55-I certified asset management system, we increasingly applied condition monitoring techniques to our strategic equipment such as the transmission switchgear and transformers. More extensive deployment of condition monitoring systems has been planned in 2010. In addition, we will further apply the technology to the 11kV underground distribution cables to assess their condition. We envision that with the more intensive application of the condition monitoring technology, we will be able to reduce further the forced outages and improve our network performance.

## Growth in customer base

Our total customer base rose from 562,717 to 563,956, with modest growth in both the domestic and commercial sectors in 2009. Likewise, electricity sales increased modestly. Overall electricity sales were 10,921 million kWh, or an increase of 0.52% over 2008. Specifically, sales to the residential sector grew by 3.26%, while sales to the industrial sector fell by 6.69%, and sales to the commercial sector rose just slightly by 0.03% over last year.

# Investment in our supply network

During 2009, 33 distribution substations were commissioned, increasing the total number of substations in the territory to 3,667. In addition, 145.9 km of distribution cable was laid.

Among our major projects completed were additional transmission circuits for the Lamma Power Station (Cyberport – Marsh Road 275kV Circuit No. I & re-configuration of Tin Wan – Kennedy Road 275kV circuit No. I), the Central Zone Substation I I kV Bus Section Improvement, the Lamma Extension 275kV Shunt Reactor No. 2, and the Wong Chuk Hang I 32kV Cable Diversion.

Serving the needs of commuters, we will expand our supply for the MTR West Island Line by commissioning one new 132/33kV 50MVA gas transformer to be installed at the MTR Admiralty Infeed Substation in 2013. For the new supply to the MTR South Island Line, two 132/33kV 30MVA gas transformers will be installed at Heung Yip Road Zone Substation and are set for commissioning in 2013.



We are enhancing our capacity to expand our supply to the MTR West Island Line.



HK Electric achieves or surpasses world-class service targets in both supply reliability and power quality.





**1.84** seconds

Emergency call average waiting time

### **Customer service**

HK Electric's continual focus on customer service has brought about impressive results. In 2009, all of our pledged customer service standards were either achieved or surpassed. The number of commendations from customers reached a record high of 1,463, reflecting a high level of customer satisfaction with our services.

### New technology

In April 2009, we successfully launched the HK Electric Customer Information System (HECIS), a robust and integrated IT system that not only manages all electricity account services more effectively, but also supports efficient delivery of customer services across multiple channels for higher customer satisfaction. The new customer information system operated smoothly and all pledged service standards were maintained during and after the migration.

# Installing smart meters

We at HK Electric are pressing forward to upgrade old infrastructures to be more intelligent and efficient. To help the business sector to devise load management programmes for higher energy efficiency, HK Electric will progressively install smart meters for commercial customers to provide them with more detailed consumption data.

#### Emergency service

Should an emergency related to electricity arise, customers of HK Electric get immediate attention. In 2009, the average waiting time for telephone calls to our Customer Emergency Services Centre was 1.84 seconds, whereas the average arrival time to the scene of the problem in urban areas in response to emergency calls was 20 minutes, both of which were better than our pledged service standards of 9 seconds and 28 minutes respectively.

### Customer relations

Through the Customer Liaison Group, we maintain close and regular relations with our customers. At the annual meeting in January 2009, we updated members on the latest developments of the Company, while a visit to Marsh Road Station Building in September 2009 introduced them to the green measures adopted there.

Pamphlets for local customers of minority languages, including Indonesian, Tagalog, and Urdu, were produced in 2009 to offer information about our electricity account services and advice on the efficient use of electricity within their communities.

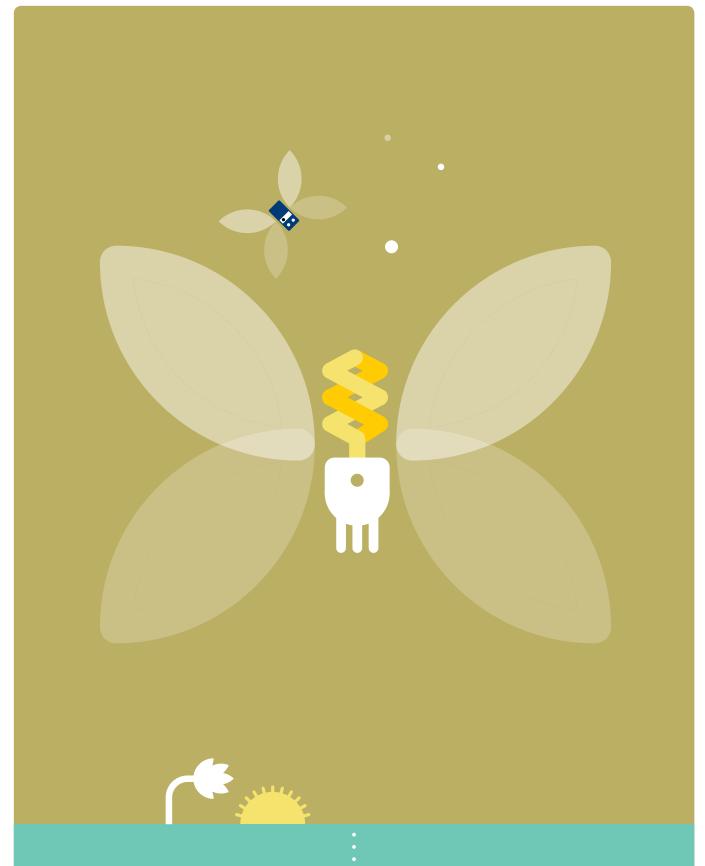
Our relationship with customers was recognised again in 2009 for the fourth consecutive year. HK Electric won the Public Service of the Year award in the corporate category and five awards in the individual category of the Customer Relationship Excellence Awards that were organised by the Asia Pacific Customer Service Consortium.



Commendations from our customers reach a new record reflecting a high level of customer satisfaction.



Pamphlets in minority languages offer information on the efficient use of electricity.



10,140,000 units

Potential electricity that could be saved from our recommendations on energy audits

### **Environment**

HK Electric actively participates in measures that show respect for the earth by efficient energy use and promoting clean technology.

# Energy efficiency

Supporting efforts by green groups, HK Electric switched off external and decorative lighting at our buildings during 'Earth Hour 2009' and 'Dim It 6.21' in March and June 2009 respectively.

We took additional steps inside our office buildings and implemented various energy efficiency and housekeeping measures. In doing so, we achieved very good energy efficiency results at our various office buildings, in excess of the 2.5% reduction targets. We also continued to recycle used paper in our offices, collecting a total of 35,250kg.

In line with the provisions under the Scheme of Control Agreement, 63 energy audits were completed for commercial customers and non government organisations in 2009. As well, an Energy Efficiency Loan Scheme was launched in collaboration with banks to help eligible customers implement energy efficiency initiatives.

### Promoting the use of electric vehicles

To support the Government's drive to promote the use of electric vehicles (EV), HK Electric converted a hybrid car to a plug-in hybrid electric vehicle in May 2009, making it the first of its kind on the streets of the territory.

We also collaborated with commercial and government car park operators to launch an EV charging infrastructure pilot programme. The first EV charging station opened for motorists at the Peak in December 2009 and four more will be completed in stages by mid February 2010. In the initial period, free service was available to allow motorists to become familiar with the charging procedures.

# Improving air quality and combating global climate change

HK Electric remains committed to combating climate change. In 2009, we carried out a carbon audit for HK Electric Centre and the Electric Tower with recommendations to reduce our carbon footprint. A carbon calculator on our website assists customers in calculating their carbon footprint. And, continuing participation in the Carbon Disclosure Project (CDP), we reported the annual greenhouse gas emissions, the mitigation efforts, and the response to CDP's questionnaire which are now accessible to the public via CDP's website.

On improving Hong Kong's air quality, we have made a submission to the Government in response to its Air Quality Objective Review consultation exercise and will work closely and actively with it to achieve future targets.

#### **Awards**

In 2009, we received several environmental awards such as the Class of Excellence IAQwi\$e Label for HK Electric Centre under the 2009 Hong Kong Award for Environmental Excellence Scheme organised by the HKSAR Government. We also took Outstanding Green Corporation Award and Outstanding Green Performance Award organised by CAPITAL Magazine and the Prime Award for Eco-Business 2009 organised by Prime Magazine.



The first electric vehicle charging station opens in December.



HK Electric switches off external and decorative lighting to support efforts by green groups.



70,190 hours

Training hours for our 2,000 employees

# Caring for our employees

HK Electric regards employees as our most valuable assets and invests a lot in training and employee wellness. We also strive to excel in health and safety performance and achieve accident-free operations.

# Employee training

In 2009, we made a continuous effort to provide training for our staff. A total of 70,190 training hours for our 2,000 employees were recorded for in-house and external training activities. This represented an average of 35 hours of training per employee.

### Employee wellness

With the introduction of our Employee Wellness Programme in 2008 with focus on physical, emotional, intellectual and social wellness, we continued to organise numerous activities and events for employees and their families, including eco-tours, outings, fitness courses, family day and an annual spring dinner which were very popular, with an encouraging increase in participation rates.

### Workplace hygiene

In response to the outbreak of Human Swine Influenza (HINI), we implemented additional health, cleaning and hygiene measures. Several major measures were taken to reduce the effect of HINI in our workplace. Included in these measures were the hourly disinfection of the lift panels and buttons; notices and posters to remind employees about preventative personal hygiene; and body temperature checking at LPS and all office buildings. As well, split office arrangement was implemented for the essential operations and contingency plans were put in place for all departments.

# Growing our talent base

To sustain our business growth and succession planning, 26 trainees were recruited in 2009. An orientation programme was arranged to enable them to quickly become familiar with the Group. Of the trainees recruited in earlier years, 21 successfully completed their two/three-year training programmes with a graduation camp in September to consolidate and reflect on their learning.

In 2009, we piloted a vocational training scheme to encourage secondary school graduates to consider engineering as their future profession and HK Electric as their preferred employer. Seven candidates were chosen to participate in a one-month training programme from July to August.

#### **Awards**

For the seventh consecutive year, HK Electric was awarded the Caring Company logo, and in May 2009 we won the Silver Award and the 7th Top Fund-raiser Award, Employee Contribution Programme.

In addition, our health and safety efforts were recognised with several awards. We won the Gold Award in the "Safety Management System Award – Others" category in the 2009 Hong Kong Occupational Safety & Health Award. As well, we were the Cup and Plate Champions and Cup 2nd Runner-up in the 2009 Occupational Safety & Health Quiz jointly organised by the Occupational Safety & Health Council and Labour Department.



We organise various recreational activities for our employees' wellness.



The family day is well received by our employees.



# **Community activities**

At HK Electric, giving back to the community has always been a meaningful part of our corporate culture. In 2009, 61 voluntary services were organised and over 4,100 hours donated by the HK Electric Volunteers Team. The total membership in the volunteer team now accounts for about 45% of our entire workforce.

# Smart power use

A record 30,000 people joined various activities under the Smart Power Campaign 2009 that was launched in early March to encourage the public to embrace energy saving as a shared value and to conserve energy in their daily lives. Activities organised included a promo design competition, roving exhibitions at MTR stations, radio programmes, and open days at the LPS.

# Green Hong Kong Green

A new three-year programme was launched jointly with the Conservancy Association in September 2009 to develop new eco-heritage routes on Hong Kong Island. It was kicked off with a competition inviting the public to name their "favourite eco-heritage hotspots" in Lung Fu Shan, Aberdeen and Tai Tam Country Parks. About 400 submissions were received and winning entries may be included in the new eco routes.

### **Education Fund**

In 2009, a HK\$2.5 million Education Fund was set up to support energy-efficiency-related education and promotional activities. External stakeholders sit on the Fund's Advisory committee and offer their views and suggestions.

The HK Electric Clean Energy Fund received a record 51 applications for funding in 2009. Of those applications

we chose 12, including one that harnesses solar energy to power an organic farm of Chinese herbs, and awarded them more than HK\$1 million. To encourage participation from schools, an experience sharing session was conducted and attended by approximately 80 school representatives. As in the past, 170 scholarships were provided to secondary school students under the HK Electric Centenary Trust.

### Caring for senior citizens

We launched a new community programme to encourage the elderly to take initiative in seeking help when needed and to bring them closer to the community, featuring district-based carnivals and monthly home visits by our volunteers.

In March 2009, we celebrated with twelve retired persons as they were named "Outstanding Third Age Citizens" in an award presentation organised by HK Electric and the Hong Kong Council of Social Service to recognise retirees with outstanding performance in lifelong learning and community service. This was a continuation of the U3A project which has now expanded to include 25 social service agencies. The programme has recently won the Asia-Pacific Superior Achievement in Branding and Reputation Award in the corporate social responsibility category.

#### Knowing your power station

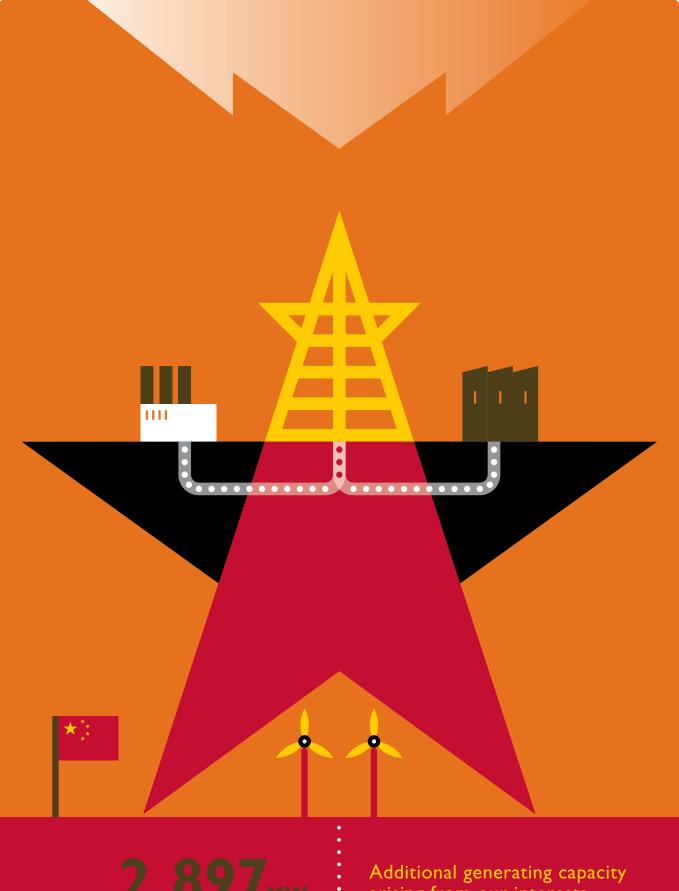
Our monthly visit programme inviting HK Electric shareholders to visit LPS has been very well received. Hundreds of shareholders and friends had the opportunity to see first hand how electricity is generated at LPS in 2009. In addition, a total of 56 other visits to LPS, Lamma Winds and Marsh Road Station were organised for various stakeholder groups throughout the year.



61 voluntary services are organised and over 4,100 hours donated by the HK Electric Volunteers Team.



The HK Electric Clean Energy Fund sponsors schools to use renewable energy.



Additional generating capacity arising from our interests in mainland China

Operations outside Hong Kong

In 2009 we expanded and grew our operations outside Hong Kong yielding a total of more than HK\$6 billion in new investments. As a result, the profits from these businesses increased substantially to over 30% of the total group profits for 2009.

### China

With our acquisition of Outram in April 2009, we took our first significant step towards a strategic stake in the electricity generation business in mainland China. Conveniently located in Guangdong province and adjacent to Hong Kong, the core assets of Outram comprise 45% equity interests in the 1,400MW Zhuhai Power Plant and the 1,200MW Jinwan Power Plant in Zhuhai, as well as the 200MW Siping Cogeneration Power Plant located in Jilin province.

# United Kingdom

In 2009, we increased our stake by 6.2% in Northern Gas Networks Holdings Limited (NGN), which owns the regulated gas distribution network serving a population of 6.7 million people from the Scottish borders to South Yorkshire. Our total interest in the company stands at 41.3%.

### **Thailand**

From our Thailand Independent Power Producer project, Ratchaburi Power Company Limited, in which we hold a 25% stake, we received a full-year's earnings in 2009. Although the project only achieved full commercial operation in June 2008, the efficiency in 2009 by the two 700MW combined cycle blocks exceeded our expectations.

### Australia

ETSA Utilities (ETSA) in South Australia, in which we have a 27.9% stake, exceeded all key financial targets in 2009. Despite the risks inherent in the economic downturn,

ETSA's regulated and unregulated businesses effectively weathered an uncertain environment, and by the year's end experienced a much more stable operating environment.

With regard to Powercor and CitiPower in Victoria, in which we also have a 27.9% stake, an extensive Smart Meter Programme is being rolled out.

#### Canada

Our 50% interest in Stanley Power Inc. provided solid and stable returns in 2009 despite the challenges of lower energy prices resulting from the economic downturn. The year was highlighted by equipment upgrades in three of the power generation stations in which Stanley Power holds an interest. The upgrades resulted in annual reductions of 5% in fuel consumption, 46,000 tonnes in greenhouse gas emissions, and an increase of 18% in generating capacity.

### New Zealand

Wellington Electricity, in which we hold a 50% stake, is the sole electricity lines operator for New Zealand's Capital City and surrounding region with a base of approximately 162,000 customers. Wellington Electricity achieved modest growth in revenue and met its financial and operating targets for 2009, notwithstanding the adverse economic climate.

# Renewable energy

Our keen interest in developing clean and renewable energy is reflected in our two wind projects in mainland China. In partnership with China Huaneng Group, a 48MW wind farm in Dali, Yunnan, and a 49.5MW wind farm in Leting, Hebei, achieved commercial operation in January and October 2009 respectively.



The core assets of Outram are in a prime location near Hong Kong.



We increase our stake to 41.3% in NGN.