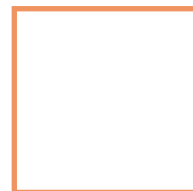
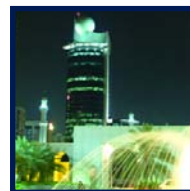
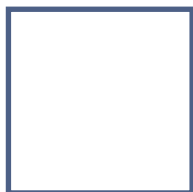




مكتب التنظيم والرقابة
Regulation & Supervision Bureau

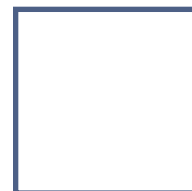


2003

ANNUAL REPORT

Regulation and Supervision Bureau

For the water and electricity sector in the Emirate of Abu Dhabi



Glossary of Key Terms used in this Publication



ADWEA Abu Dhabi Water and Electricity Authority

ADWEC Abu Dhabi Water and Electricity Company

Production

AMPC Al Mirfa Power Company

APC Arabian Power Company

ATPC Al Taweelah Power Company

BPC Bainounah Power Company

ECPC Emirates CMS Power Company

GTTPC Gulf Total Tracetebeel Power Company

SCIPCO Shuweihat CMS International Power Company

UANPC Umm Al Nar Power Company

UWEC Union Water and Electricity Company

Transmission and Distribution

AADC Al Ain Distribution Company

ADDC Abu Dhabi Distribution Company

RASCO Remote Areas Services Company

TRANSCO Abu Dhabi Transmission and Dispatch Company

ENG Emirates National Grid

Other common terms

IWPP Independent Water and Power Producer

MG Million Gallons *

MGD Million Gallons per Day *

MW Mega Watts

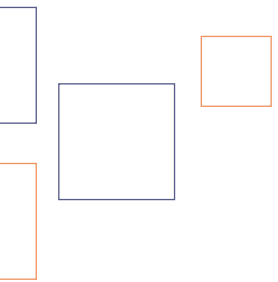
MWh Mega Watt hours (Note: 1 unit of electricity equals 1 kilo Watt hour (kWh))

PC Production Company

PC2 Price Control Two

TG Thousand Gallons * (The unit of purchase and sale of water in the sector)

* Unless stated all Gallons are Imperial.



ANNUAL REPORT 2003

Regulation and Supervision Bureau

For the water and electricity sector in the Emirate of Abu Dhabi

For the period 1 January 2003 - 31 December 2003

The Regulation and Supervision Bureau (the Bureau) was established by Law No.(2) of 1998 issued by the Government of Abu Dhabi, to regulate and supervise the water and electricity sector in the Emirate of Abu Dhabi. Law No.(2) details the Bureau's primary and general duties, general functions, powers and licensing criteria.



His Highness Sheikh Zayed Bin Sultan Al Nahyan
President of the UAE and Ruler of Abu Dhabi



His Highness Sheikh Khalifa Bin Zayed Al Nahyan

Crown Prince and Deputy Ruler of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces



His Highness Sheikh Diab Bin Zayed Al Nahyan
Chairman of the Abu Dhabi Water & Electricity Authority

PART 1

Sector Activities

Chairman's Statement

Sector Overview by the Director General

Technical Affairs

Environment

Economic Regulation

Customer Standards

Bureau Specific Matters

Publications



Chairman's Statement

This year has witnessed considerable activity in the Abu Dhabi Emirate's water and electricity sector, especially at the production end of the supply chain.

During the year Umm Al Nar Power Company's assets were sold to a newly formed Independent Water and Power Producer (IWPP) known as Arabian Power Company, following the completion of a competitive bidding process. The new company was licensed by the Bureau to generate electricity and produce water in June 2003.



Zaal Al Hameeri

A second significant development saw the entry of the Union Water and Electricity Company (UWEC) into the sector via a water connection to the transmission grid at Sweihan, situated between Abu Dhabi and the Emirate's second city of Al Ain. The Bureau licensed UWEC for the bulk delivery and storage of water in the Emirate in November.

The UWEC connection has effectively provided an increase in licensed water production capacity of over 14 percent in the year compared with 2002. Full production is due to commence during 2004.

The producer companies sell their output to distribution companies via a bulk supply tariff calculated and produced each year by ADWEC. From 2003 onwards this tariff has been restructured to promote more cost reflective pricing signals to buyers by the lowering of the variable hourly rate and a raising of the demand charge. This change has promoted the development, by the Bureau, of non-standard, non-subsidised tariffs applicable to major users connected to the transmission system.

Internally the Bureau has strengthened its staff skills by the appointment of a Director of Technical Affairs, an Electricity Manager and a Customer Services Officer. We also continue to promote the concept of monopoly regulation through membership of the Arab Electricity Regulatory Forum.

Overall the year has been a highly successful one for the sector and on behalf of the Bureau it is my pleasure to welcome you to our 2003 Annual Report.

A handwritten signature in black ink, appearing to be 'Zaal Al Hameeri'.

ZAAL AL HAMEERI

ARABIAN POWER COMPANY (APC)

APC was issued a licence by the Bureau on 21 June 2003 at the time of the purchase of Umm Al Nar's assets. The licence has been structured to allow for the refurbishment and new-build stages by providing for much higher installed generation and desalination capacities at the time of issue which then reduce after the 1 January 2009.

Arabian Power Company (APC) is the fourth IWPP company, owned 60 percent by Arabian United Power Company (a wholly owned subsidiary of ADWEA) and 40 percent by ITM Investment Company (owned 50 percent by International Power, 35 percent by TEPCO and 15 percent by Mitsui).

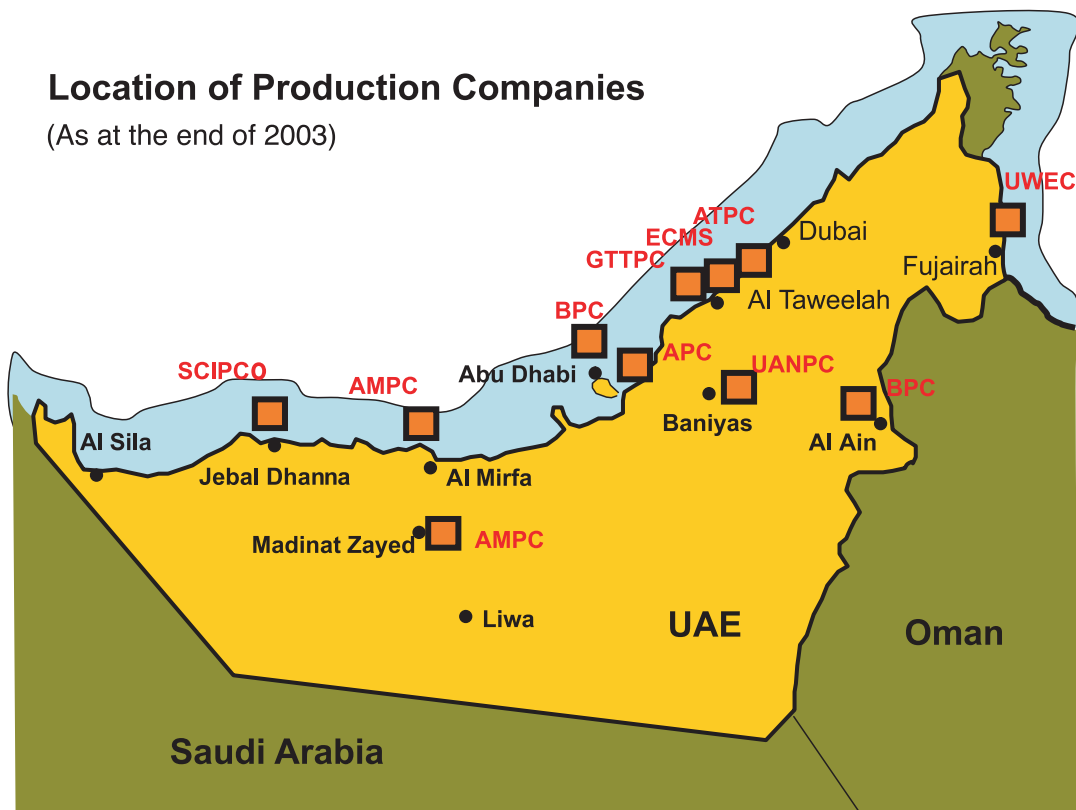


Nick Carter

APC owns and operates the existing power and desalination plant on Sas Al Nakhl island, with an installed gross capacity of 1,040MW and 164.7MGD, as well as the construction and operation of the new build power and water plant. After decommissioning of most of the old plant the final capacity of the plant will be 1,550MW and 95 MGD.

Location of Production Companies

(As at the end of 2003)





BULK SUPPLY TARIFF (BST)

In order to promote the use of demand-side-management techniques and reduce load at peak times the Bureau in consultation with ADWEC, developed a more cost reflective tariff for 2003 onwards. Basically the tariff consists of two components a fixed cost (Demand Charge) and a variable cost (System Marginal Price (SMP)).

The new BST structure is especially important for major consumers of power or water who might connect directly to the transmission systems and take bulk supplies of electricity or water at a special tariff designed and approved by the Bureau.

In essence the BST was restructured to weight the Demand Charge more with respect to the total costs. Given that the Demand Charge is levied on the demand taken at system peak, reducing demand will have a dramatic effect on overall tariff costs to a user.

The Bureau in conjunction with ADWEC are keen to promote the benefits of reducing load at the time of system peaks as the benefits to Transco and the sector as a whole are considerable. Savings mainly arise due to the avoidance for the need to use highly expensive generation plant at peak times.

COMMISSIONING OF GTTPC

Abu Dhabi's second independent water and power project (IWPP), Gulf Total Tractebel, previously known as Taweelah A1, was formally commissioned in May of 2003.

This cogeneration facility was developed jointly by an international consortium of France's Total and Belgium's Tractebel, after they were awarded the contract in the third quarter of 2000 by the Abu Dhabi Water and Electricity Authority (ADWEA).

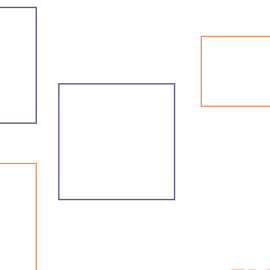
Total and Tractebel jointly own 40 percent of the project company called Gulf Total Tractebel Power Company (GTTPC), while the remaining 60 percent is owned by ADWEA.

This project is of special interest as it was the first IWPP in the region to purchase existing generation and desalination assets. Commissioned in 1989, Taweelah A1 was the oldest plant in the Taweelah complex, with an original capacity of 225 MW and 29 MGD.

The new project required not only the refurbishment of this plant, but also the addition of new capacity to achieve licensed capacities of up to 1,431 MW and 84.8 MGD.

DOLPHIN

The Dolphin project entails the construction of an undersea pipeline from Qatar's North gas field known as 'Ras Laffan' to a landfall site at Al Taweelah in Abu Dhabi. The UAE based Dolphin Energy project is expected to supply all the gas needed for Abu Dhabi's power plants in Taweelah through a gas supply arrangement with ADWEC. Gas supplies are expected to be available during 2006.



EMIRATES NATIONAL GRID

The proposal for an Emirates National Grid (ENG) has made significant progress in 2003, with a detailed feasibility study and outline plan being completed. This project will interconnect the networks of four electricity authorities: ADWEA, Dubai Electricity and Water Authority (DEWA), Federal Electricity and Water Authority (FEWA), and Sharjah Electricity and Water Authority (SEWA), plus the Union Water and Electricity Company (UWEC). The ENG project will bring benefits to the Emirates in providing the means to select the most economic generation plant as well as reduce spinning reserve while improving overall system security.

GULF CO-OPERATION COUNCIL (GCC) GRID

Invitations to prequalify for the engineering, procurement and construction (EPC) contracts on the first phase of the proposed GCC power grid were issued at the end of the year. The estimated \$1,200 million first phase targets the interconnection of the power systems of Kuwait, Saudi Arabia, Bahrain and Qatar plus the construction of a control centre. It is scheduled to be completed by 2008.

It is expected to be separated into three main blocks, each divided into multiple packages: there will be seven substation contracts, five transmission line packages and a single control, protection and telecommunications package. The schedule laid out by the client, the Al-Khobar-based GCC Interconnection Authority (GCCIA), provides for bids to be completed and submitted by the end of 2004.

It is anticipated that further expansion of the GCC Grid will incorporate the UAE and Oman. Arguments for the establishment of the grid centre on the sharing of spinning reserve and cross-border capacity.

RFP FOR AL Taweelah

Abu Dhabi's power and water privatisation programme continues to move forward with ADWEA's declared intention to create a fifth IWPP from the sale of the existing Al Taweelah Power Company assets. The proposal is to expand the Taweelah B plant and build a new power and desalination plant on the same site. The new plant to be developed will have a power generating capacity of 1,000 MW and 65 MGD of water. The existing Taweelah B plant has a power generation capacity of approximately 1,000 MW and produces 92 MGD of water.

It is anticipated that the Request for Proposal (RfP) will be issued during the first quarter of 2004 following a period of market assessment. The Al Taweelah Power Company plant is the only fully government-owned co-generation plant in the Taweelah complex.

Taweelah RO

Small-scale trials have continued on reverse osmosis (RO) operations at the Taweelah site. In conjunction with these trials project details are currently under negotiation for an RO plant to produce 50 MGD at the same location adjacent to the existing Al Taweelah stations.



Similar to Abu Dhabi's independent water and power projects (IWPP), a new special purpose company will be formed for the Taweelah RO project, in which it is likely that ADWEA will take a 60 percent equity stake while the remaining 40 percent will be held by external companies.

UNION WATER AND ELECTRICITY COMPANY (UWEC)

UWEC was granted a licence by the Bureau on 1 November 2003 for the bulk delivery and storage of water in the Emirate of Abu Dhabi for up to 100 million gallons per day (MGD). This was an important milestone as it established regulatory control over an outside company that wished to deliver and sell water in the Emirate. This aspect is of particular importance if the electricity Emirates National Grid (ENG) should come into being.

UWEC has established a 656 MW power generation and a 100 MGD water desalination plant at Qidfa, in Fujairah. A dual 179 km water pipeline, with a capacity to transmit 180 MGD of water to Sweihan, has also been built which provides a connection to the Transco network.

The major part of the electricity output will be supplied to the Northern Emirates – where demand for electricity is rising by between 10 – 12 percent a year – through a new 400 kV transmission line from Fujairah to Al Dhaid (Sharjah). This transmission line may eventually be interconnected to the proposed Emirates National Grid.

The desalination plant will produce 62.5 MGD of water by employing multi-stage flash (MSF) technology and 37.5 MGD by the use of reverse osmosis (RO). This adds a unique aspect to this plant in the Middle East using a combination of the two water desalination technologies and is a first in the region.

WATER SUPPLY REGULATIONS (2003)

The Water Supply Regulations effective from 1 October 2003 are primarily aimed at empowering distribution companies to insist that customers must have a meter and an automatic control valve at their point of connection with the water network. This allows the distribution companies, Al Ain especially, to pressurise their water systems and locate and repair leaks which at present is not possible with timed supplies.

Ultimately the impact of such legislation will be a significant reduction in un-accounted for water losses.

In addition the Bureau has issued a comprehensive guide to the Regulations in order to illustrate one method of providing full compliance.

ELECTRICITY

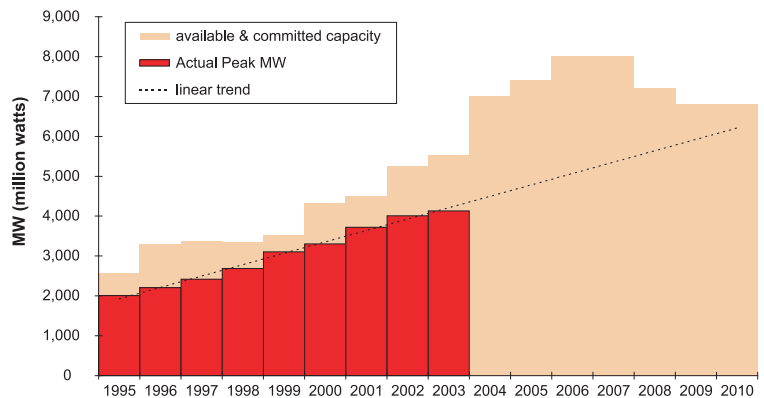
DEMAND

The Emirate of Abu Dhabi has experienced a high rate of growth over the past ten years, driven by continuing urbanisation, expansion of infrastructure, housing, commercial buildings and agricultural development. However, the peak electricity demand in September 2003 increased by only 3 percent on the previous year, whereas annual growth rates have been in the range of 6-12 percent in preceding years. The underlying growth through the rest of 2003 was around 5 percent, which is still below expectations. The reasons for this included: a reduction in construction activity, slowing down of major government projects and reduced use of irrigation (and therefore water pumping requirements) in agricultural development land.

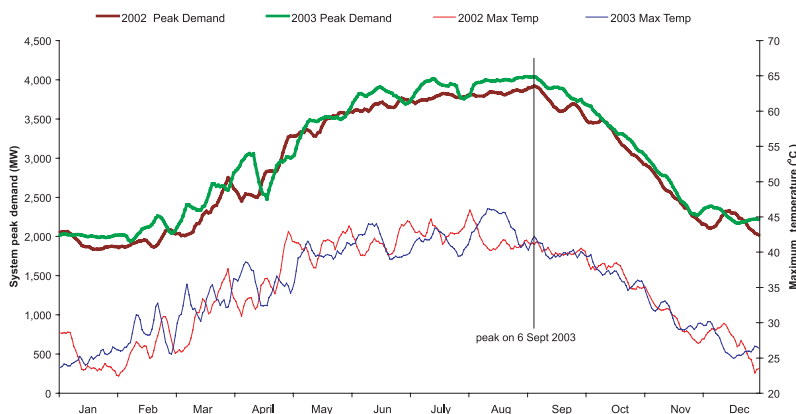
In addition, the peak demand, usually occurring in September of each year, was affected by a delayed return of schools and other organisations after the summer vacation. The peak is traditionally impacted by the return of schools and offices being coincident with high temperatures in the first week of September. Also, the peak demand can be reduced if high temperatures are not sustained for more than one day in succession. The temperature on the day of peak (6 September 2003) was 44.6°C but fell by over 3°C on the following day.

The increase in capacity for 2004 reflects SCIPCO's contribution of 1,500 MW. Reductions after 2007 are associated with the closure of existing plant at APC.

Electricity peak demand vs. generation capacity (MW)



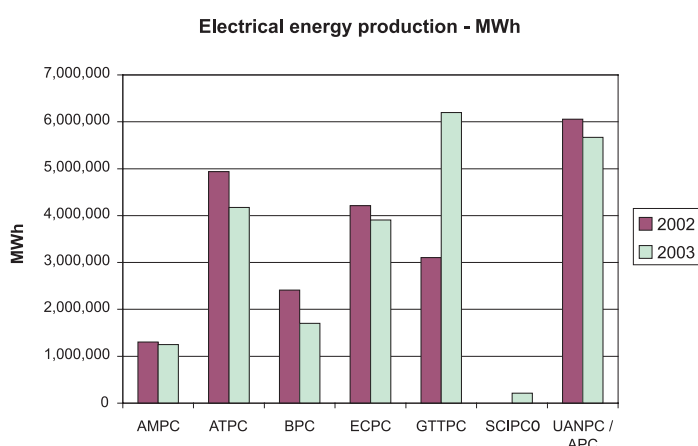
Peak demand v maximum daily temperature





GENERATION PERFORMANCE

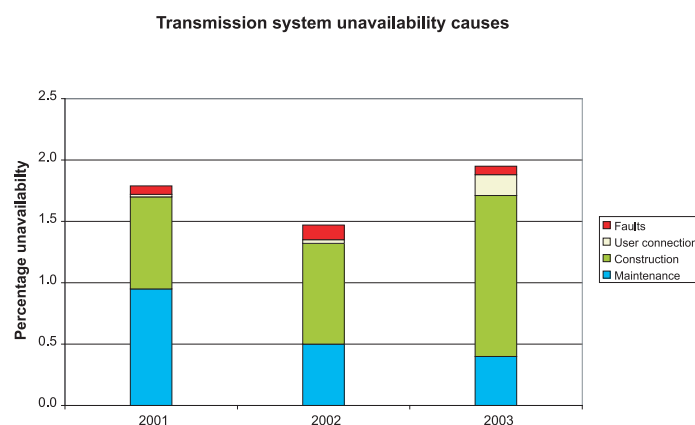
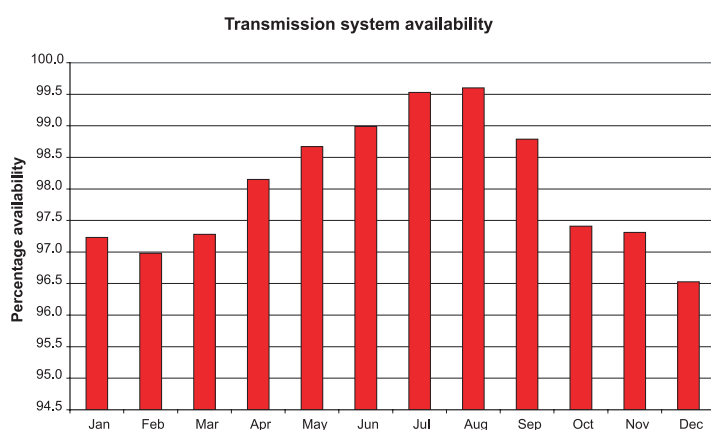
The sector gross energy production in 2003 was 23,205,312 MWh which was 5 percent greater than the previous year. A significant increase in production from the fully commissioned GTTPC company for 2003 is noted plus some minor contribution from SCIPCO for testing purposes.



Smaller generation units in remote areas and islands owned by RASCO produced 93,673 MWh. The major part of this production was located on Dalma Island at 61,981 MWh. Plans are in place to gradually remove generating sets located on most islands by connection to the main distribution network. The sector also imported 178,444 MWh from the Takreer oil refining company, providing a useful contribution in meeting system demand.

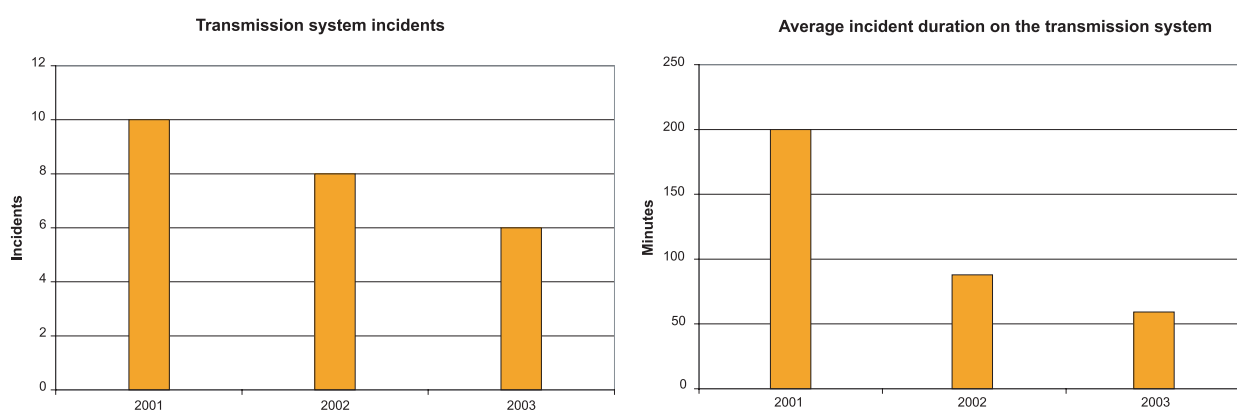
TRANSMISSION SYSTEM PERFORMANCE

The performance of the electricity transmission system serving the Emirate of Abu Dhabi is considered to be of a high standard, and comparable with utility companies elsewhere. System unavailability is a key measure which reflects the amount of time that parts of the system are not in operation (defined as the ratio of the unavailable circuit hours over the total annual circuit hours). The chart below illustrates that the system availability normally decreases in the winter months due to planned outages, such as plant maintenance being scheduled to take place at this time, when system demand is at its lowest.



The trend in system unavailability shows that the annual total for the past three years has remained within expectations (1.5 - 2 percent), despite showing an upward trend.

The charts below illustrate that the number of incidents causing interruptions have reduced significantly in the past three years.



Two transmission system incidents were investigated by the Bureau: one caused a loss of around 30MW in the Mussafah industrial area, due to problems with protection equipment at Mirfa 220kV substation; the other caused loss of supplies to Khalifa City due to a fault on a 132kV circuit between Abu Dhabi airport and Al Taweelah power station (the airport did not lose supply due to the presence of alternative supplies).

DISTRIBUTION SYSTEM PERFORMANCE

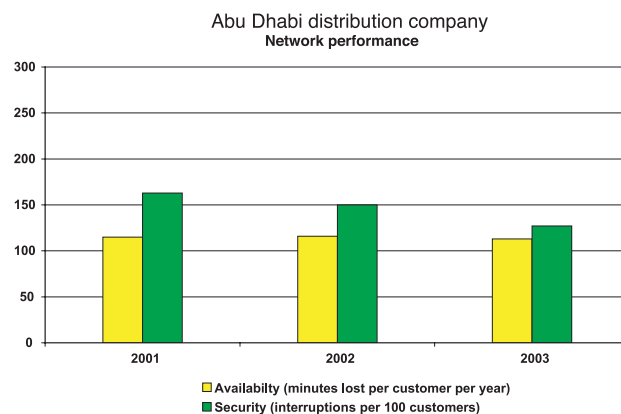
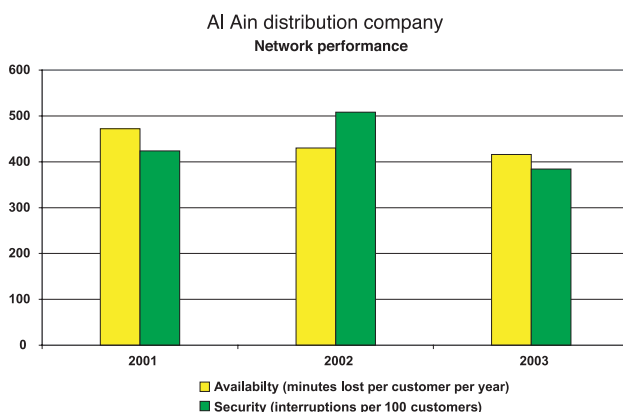
The performance of the distribution system is reviewed by the Bureau separately for the two distribution companies; Al Ain Distribution Company (AADC) and Abu Dhabi Distribution Company (ADDC). The performance of these companies' networks is significantly different since the former has a large, sparsely populated area, while the latter has a concentration of customers in and around the city of Abu Dhabi.

Al Ain Distribution Company

The performance of AADC's electricity distribution network has shown a dramatic improvement in the past year, particularly in the average number of interruptions; from 508 interruptions per 100 customers in 2002, to 384 in 2003. This was achieved mainly through a reduction in the number of 33kV overhead line faults. However, even with this improvement the main causes of interruptions are still high voltage overhead line faults. Consequently the company is planning to make further improvements by providing more interconnection in the 11kV network and also by addressing overloading issues which cause high numbers of fuse failures.



The time taken to restore an interruption after a fault, is tracked by measuring the percentage of interruptions restored within 3 hour and 24 hour time bands. AADC has achieved a major improvement in this area over the past year, particularly in the low voltage network which improved from 42 percent restored in 3 hours to 83 percent.



Abu Dhabi Distribution Company

The trend in annual performance for ADDC shows a continuing improvement over the last three years with a 15 percent reduction in customer interruptions in 2003 compared with the previous year. Analysis of the contribution to security and availability at the different voltage levels shows that the main causes of poor performance arise from the 11kV network, which accounted for the majority of customer interruptions, and customer minutes lost.

The reliability of the 11kV network is being reviewed and new technology such as remote control and automatic restoration schemes have been implemented as pilot projects. In terms of customer interruptions and minutes lost, the 33kV network performed well in 2003, in line with previous years. The measure of restoration within 3 hours has maintained a good performance for the last two years, at 85 percent.

STANDARDS AND REGULATIONS

The Bureau is responsible for ensuring that the sector operates under consistent and appropriate standards covering issues such as network performance, supply quality, new connections, equipment specifications, and safety of staff and the public. Significant progress was made in 2003 in developing regulations in the following areas:

Technical Standards

The licences of the two distribution companies include a requirement to develop standards covering specialist areas such as earthing, voltage fluctuations, harmonic interference and connection of generators. As part of its technical advisory role, the Bureau has worked with the Distribution Code Review Panel to develop new standards and in some areas the Bureau has proposed that international standards are adopted (such as from the UK).

Transmission Code (Water and Electricity)

The Bureau, together with the licensee companies, has an obligation to review and update various operating codes which govern activities in the sector. A second amendment to the Transmission Code was made in 2003, with the main objective of improving planning data provided by the distribution companies to the power and water procurement company (ADWEC). This in turn will improve the process of forecasting future water and electricity demand and thus future capacity requirements.

WATER

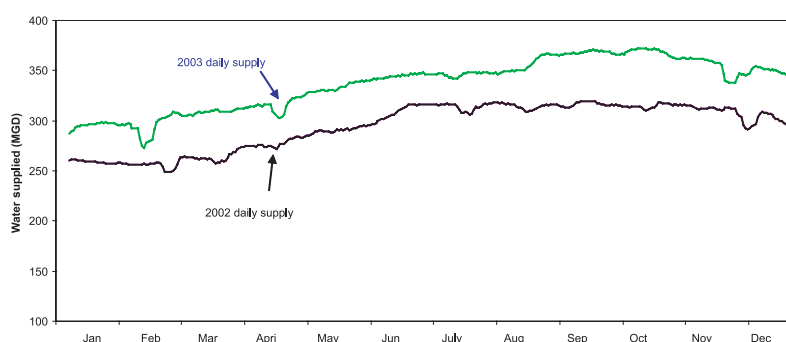
DEMAND

The gross water production in 2003 increased by 12 percent from the previous year with available production capacity of 460 million gallons per day, excluding RASCO's production. The maximum quantity of water entering the network in a single day was 380 MG, representing an increase of 17 percent over 2002.

Water demand is expected to grow at an average of 7 percent per annum up to the year 2010. The largest contribution to this increase is through agricultural demand which includes water used for the irrigation of parks, forests and farms.

Due to constraints in the transmission system and together with demand management programmes adopted by the distribution companies, the maximum supply was equivalent to the actual controlled demand. System losses and RASCO production are not accounted for in the diagram below which represents the supply pattern in 2003.

2002 - 2003 Water daily supply profile

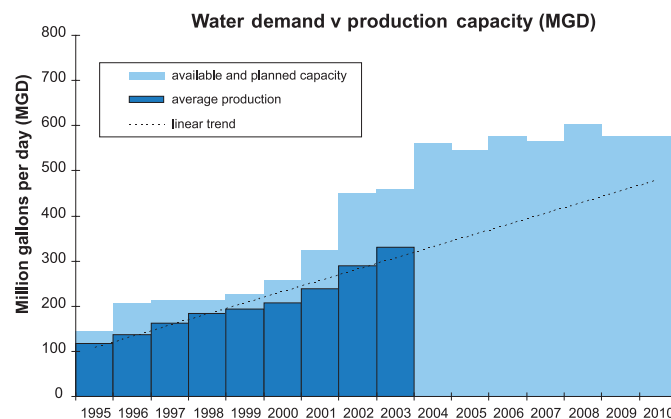




The majority of customers in the Al Ain region receive an intermittent water supply from their distribution company, normally around 4 to 6 hours in every 24 hours. Although this appears to be a limitation, the use of large storage tanks in customer's premises, and the availability of well water cushions the effect of timed supplies and means that available water generally meets the required demand.

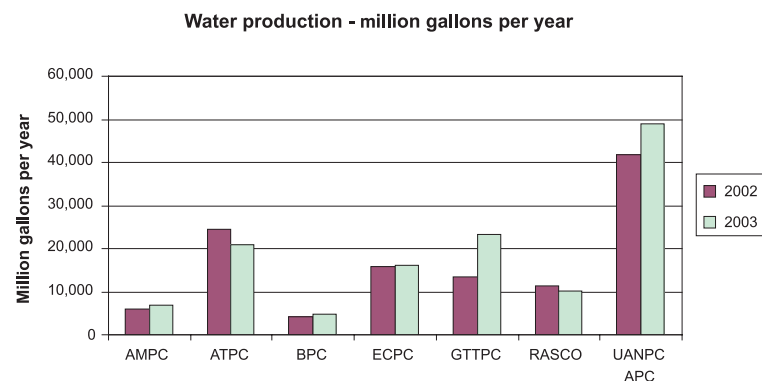
The demand forecast is based on the estimated consumption of a range of user categories with an annual growth factor assumed, as well as an underlying growth in population and significant rural and urban development. Also well water production (by the sector) is planned to decrease in future years in an effort to reduce depletion of this natural resource. The chart shows the historic and forecast demand along with the production capacity currently planned or committed.

The larger difference shown in the figure between average production, demand and available capacity in 2002 and 2003 is mainly due to the completion of new production plants at GTTPC, ECPC and AMPC.



PRODUCTION PERFORMANCE

The sector's water production for 2003 was approximately 131,150 million gallons. Water produced by desalination represented 92 percent of the total produced water; the remaining supplies were from wells and smaller desalination units in remote areas owned by RASCO.



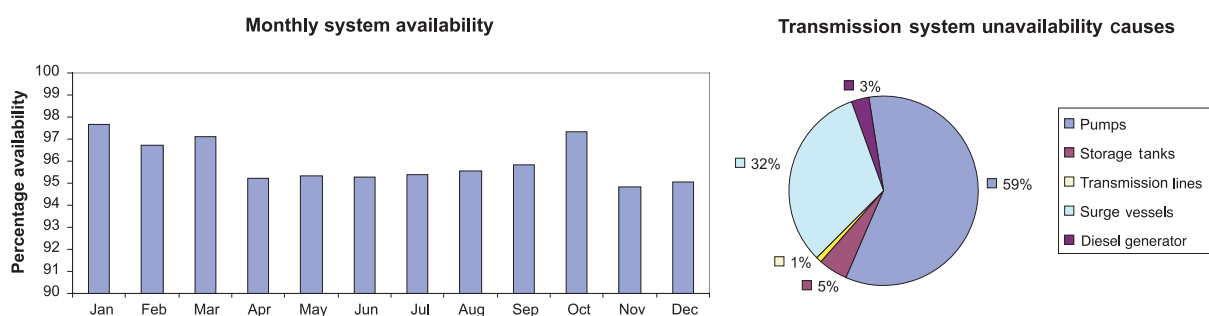
TRANSMISSION SYSTEM PERFORMANCE

Performance measures for the water transmission system were introduced for the first time in 2003. Three Key Performance Indicators (KPI's) were developed by the Bureau namely: Unaccounted for Water, Security of Supply, and System Availability.

The measure of unaccounted for water requires further improvement in transmission system metering and the Bureau is of the view that in-sufficient data is available for reliable reporting at this stage.

System availability was reported as 96 percent for the year. The largest contributor to unavailability of system components were pumps, although this is to be expected since the system is designed to be able to cater for outages of pumps for maintenance and other work. Overall, 24 percent of the total unavailability was due to unplanned events (breakdowns or failures) and 76 percent due to planned outages (maintenance or new connections).

For security of supply measures there were 91 transmission system interruptions recorded which affected the distribution system. The largest interruption equated to 12 MG of undelivered water. However, given adequate storage facilities in the system these events were managed so as not to affect customers directly.

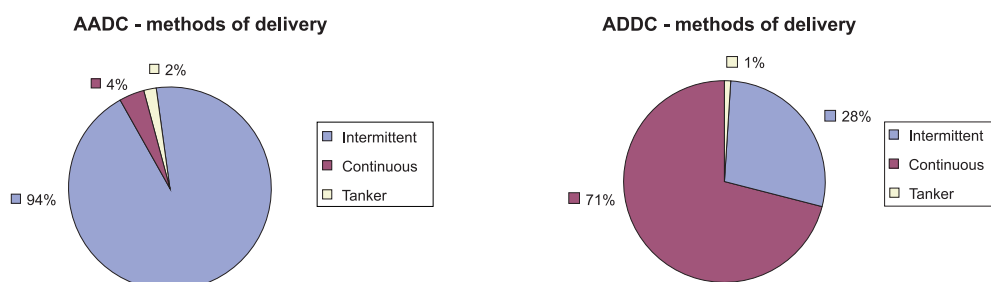


DISTRIBUTION SYSTEM PERFORMANCE

The performance of the water distribution system has shown significant improvement particularly with regard to minimum pressure and reliability of supply.

Over 99 percent of customers in Abu Dhabi enjoy piped continuous supplies, the remainder being supplied by road tankers. The overall water distributed by ADDC represents 73 percent of the total with 27 percent supplied by AADC.

Regarding methods of delivery, there has been a slight reduction in the use of tankers for ADDC customers but a considerable reduction in tankerage use for Al Ain customers. Major pressurisation plans are in place for the implementation of continuous supplies in Al Ain city over the next three years.





WATER QUALITY

Production

The overall compliance by the water producers, with the Water Quality Regulations Sampling Frequency Measure was 90.4 percent and 99.85 percent for the Prescribed Concentration or Values (PCV) for the 38 parameters listed in the Regulations which include physical, chemical and microbiological testing.

The compliance with water quality demonstrated that the water produced met the Regulations and no events that constituted a contamination incident were identified or reported from production sources. Licensed water producers have conducted approximately 26,000 tests during the year.

Transmission and Distribution

In terms of overall compliance relating to the transmission and distribution systems the Water Quality Regulations Sampling Frequency Measure was 59 percent and the prescribed Concentration or Values (PCV) was 99.5 percent for the 52 parameters which TRANSCO, AADC and ADDC are required to sample and comply with.

Testing of water quality in 2003 demonstrated that water has met the Regulations PCV and no events that constituted a contamination incident were identified or reported. However, compliance with the Sampling Frequency Measure is still relatively low, although slight improvements were witnessed in 2003.

The overall number of tests taken from the transmission and distribution systems for all 52 parameters was 44,000, during the year.

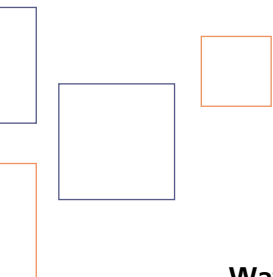
RELATED MATTERS

Water System Management Project

The Bureau commissioned Mott MacDonald (UK) consultants to carry out a strategic study on current and future water supplies in the Emirate. Issues addressed included the development of new security standards and planning guidelines which encompassed customer interruption frequency, reliability of supplies, and design of the water system using a probabilistic approach to network reliability. The guidelines also introduced limits for the numbers of customers that can be interrupted between system isolation valves as well as the provision of duplicate or standby supply routes.

The study also proposed a change in the regulatory price formula for TRANSCO and the distribution companies, promoting improved monitoring and management of water leakage.

Finally, while contingency plans were in place, the review proposed some improvements in information exchange, such as internal and external contact points. The study reviewed in detail various major incident scenarios such as contamination at a key desalination site (e.g. by an oil spillage at sea) or breakdown of transmission and distribution lines and pumping stations at various strategic points and provided appropriate methodologies for dealing with such events.



Water Quality Regulations - Amendment

The Water Quality Regulations came into force in January 2000 and are intended to ensure the quality of potable water delivered to all the customers in the Emirate of Abu Dhabi is wholesome. They are applicable to licensees who produce, transmit, deliver and distribute water.

Operational experience by licensees and the Bureau, gained during the last four years, indicated that it was an appropriate time for a review of the Regulations in the light of current international best practice and the sector's water quality performance achievements to date. The Bureau facilitated extensive consultation including running workshops and various meetings with all sector participants. The amendments were approved and will be issued in January 2004. The amendments relate to:

- Defining the World Health Organisation Water Quality Guidelines as a reference to the Regulations.
- Strengthening the contravention rules around microbiological aspects of the water quality.
- Amending some of the limits and parameters within the tables prescribed concentration or values attached to the Regulations.
- Ensuring the water supplied at source is not aggressive and has no corrosive effects on a pipeline's internal material particularly cement lined ductile iron pipes which are widely used in the transmission and distribution systems.

SAFETY

There were three fatalities during the year which required the Bureau to undertake investigations and seek the implementation of further-avoidance plans by the companies involved.

In the Shahama region of ADDC an electrician was killed while working on a live low voltage (LV) feeder pillar. The Bureau issued instructions for a number of safety improvements to be undertaken, as well as improved working procedures for the LV distribution system.

Secondly, a linesman was killed while replacing a high voltage fuse on a pole-mounted transformer in the Al Ain region. Following a series of detailed audits the Bureau and AADC established suitable operating standards.

A third fatality was due to a fall by a contractor working at the SCIPCo construction site. The Bureau were satisfied with the improvements agreed to be put in place by the company following the incident.

Environment



REGULATIONS AND STANDARDS

The Bureau has worked closely with the Environment Research and Wildlife Development Agency (ERWDA) to further develop an environmental regulatory system. Further work will include the design and implementation of programmes to ensure that the water and electricity sector is in compliance with current environmental laws and regulations.

Work has also centered on reviewing the current environmental legislation and regulatory requirements issued by the Federal Environment Agency (FEA).

A preliminary set of environmental monitoring parameters were established to focus on production companies' (PCs) outputs. These included gaseous emissions to the air and the physical, chemical and biological properties of effluent discharges to the marine environment (such as temperature, total dissolved solids, total suspended solids, oil, oxygen levels and the concentration of some heavy metals). During the latter part of the year, these parameters were measured around each of the PC sites and results were submitted to the Bureau.

Monitoring programmes will continue throughout 2004 so as to gain an understanding of the current emission levels and at the same time ensure that the most significant environmental impacts are being effectively identified and managed.

ERWDA AIR QUALITY MONITORING AND MANAGEMENT PROJECT

Recently ERWDA signed a contract with the Norwegian Institute for Air Research to carry out an Air Quality Monitoring and Management Study for the Emirate of Abu Dhabi.

The study is focused on monitoring and managing the quality of air in the Emirate through monitoring emissions from sources, such as power plants, and vehicular traffic and taking appropriate measures to reduce emissions from such sources. The study is subdivided into a number of stages, the first of which consists of baseline data collection and assessment in collaboration with a multi-disciplinary technical team representing ADWEA, Abu Dhabi National Oil Company (ADNOC), Abu Dhabi Municipality, Al Ain Municipality, and Abu Dhabi Police Department.

In 2003, ERWDA, in collaboration with the Bureau, collected air quality data from the sector generation and desalination plants as input data for the project. It is anticipated that the Bureau will continue to be involved in this study through to completion.

ENVIRONMENTAL PERMITS

During the year, ERWDA commenced a programme to issue environmental permits to all water and electricity producers in the Emirate. These permits specify the terms under which the companies can undertake their activities and recommend actions for improvement, where appropriate. In June 2003, ERWDA issued the first operating permit in the sector to Arabian Power Company. Subsequently, a monitoring and inspection programme was developed to monitor progress and ensure that the permit conditions were maintained.

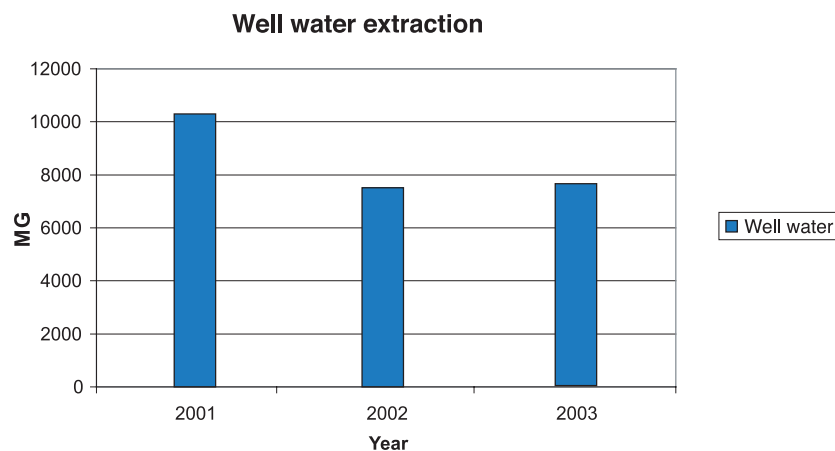
Towards the end of 2003, arrangements were made by the Bureau, ADWEA Research Center and the production companies to proceed with the permitting of all water and electricity producer companies. Thus far, ERWDA has received a number of permit applications from the affected companies.

WATER CONSERVATION

Recent studies and research indicate that ground water levels have been constantly dropping over previous years. This depletion is mainly due to extraction rates of ground water exceeding replenishment rates.

In line with the government's direction of preserving the environment and developing strategies to manage fresh water resources, the sector has taken measures to reduce well water extraction to conserve fresh water resources and preserve ground water quality.

In 2001, well water production comprised 10 percent of the total water consumed by the sector but has reduced by almost a quarter in 2003 compared with 2002. Plans are in place to further reduce well water extraction over the next few years.



Economic Regulation



NEW RASCO PRICE CONTROLS FOR 2004 AND 2005

RASCO (the Abu Dhabi Company for Servicing Remote Areas) is responsible for providing water and electricity services in remote areas, including Delma Island and parts of the Western and Eastern regions not connected to the transmission and distribution companies' networks. While RASCO transferred their distribution and supply assets to the distribution companies in 2001, it retained ownership of production assets in the remote areas. These assets are operated on RASCO's behalf by ADDC and AADC in their respective licensed areas.

During 2003, the Bureau reviewed the prices at which RASCO sells water and electricity to the distribution companies and published two consultation papers, in May and July 2003. These were followed by Draft and Final Proposals, in September and November 2003 respectively.

These documents set out the Bureau's proposals for two-incentive based CPI-X revenue caps for RASCO for 2004 and 2005, separately for its electricity generation and water production activities. The new price controls will provide incentives for RASCO to reduce costs and improve performance and will streamline the sector subsidy calculations.

The structure of the price controls for each business of RASCO is summarised below:

$$MAR_t = a_t + (b_t \times \text{Revenue Driver}_t) + F_t + Q_t - K_t$$

Where:

- MAR_t** maximum Allowed Revenue in year t
- F_t** allowed fuel cost, as defined below.
- Q_t** for performance under the Performance Incentive Scheme (PIS).
- K_t** the correction factor for under-or over-recovery of revenue in the previous year.
- a_t** a fixed revenue term for year t.
- b_t** revenue driver co-efficient for year t.

The "revenue driver" for electricity is electricity generation capacity (measured in kilowatts) and for water is annual water production (measured in thousand imperial gallons).

Values of a and b for 2004 are given in the table below. For 2005, these will increase according to the formula CPI – X, where CPI is the UAE Consumer Price Index. Values of X are also given in the table below:

Values for RASCO Price Controls (2004-2005)

	Values for 2004		
	X	a	b
Electricity Generation Business	0.00	32.57 AED million	62.76 AED/kW
Water Production Business	0.00	79.35 AED million	3.89 AED/TG

For each business, the allowed fuel cost F_t for any year 't' of the control period (2004-2005) is calculated as a weighted average of actual fuel costs and a benchmark level of fuel costs, as follows:

$$F_t = (0.95 \times AF_t) + (0.05 \times Z_t \times BUF)$$

Where:

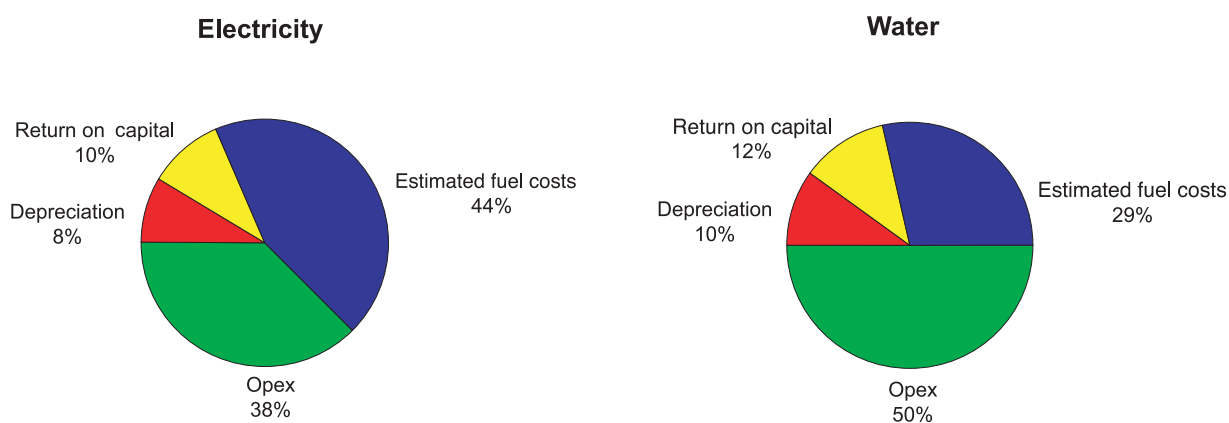
AF_t = Actual fuel costs of RASCO for electricity or water in year t (AED million)

Z_t = In the case of the electricity business, means the quantity of electricity produced from any source in year t (expressed in kWh) and in the case of the water business means the quantity of water produced from distillers only in year t (TG)

BUF = The benchmark unit fuel costs for electricity and water (20 fils/kWh and 8 AED/TG, respectively), set by the Bureau based on realistically achievable levels of fuel consumption efficiency by RASCO.

A breakdown of the MARs into their constituent cost components is given in the figures below, for electricity and water:

Constituents of RASCO MARs





IMPROVEMENT OF 2003 BST TARIFF STRUCTURE

The Bulk Supply Tariffs (BSTs) are the prices at which ADWEC sells electricity and water to the distribution companies. The BSTs comprise two components:

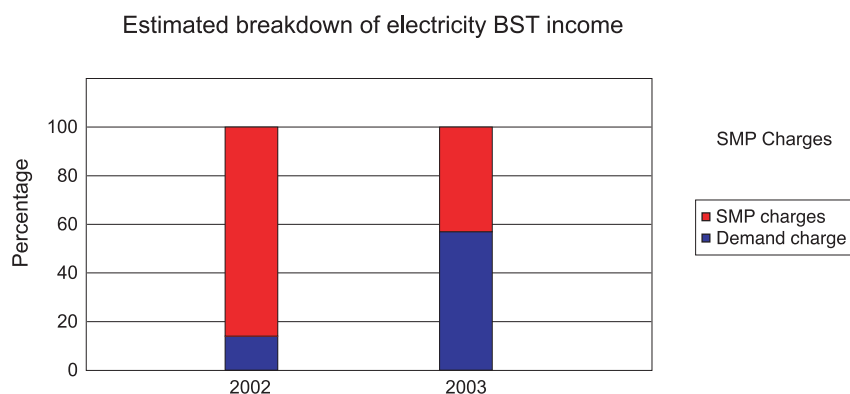
- Demand Charge – an annual charge levied on distribution companies according to their contribution to the sector's annual peak demand.
- System Marginal Price (SMP) Charges – hourly charges levied on distribution companies according to their demand in each hour of the year.

Historically, SMP Charges have accounted for the majority of BST revenues. For the 2003 BST, the Bureau undertook to review the structure of the Electricity BST charges to improve the economic signal to customers. ADWEC supported the review.

The Bureau therefore issued a consultation paper on 25 February 2003 setting out its proposal to improve the cost-reflectivity of the SMP Charges and increase the Demand (peak-related) Charges.

The proposal did not have any effect on the financial positions of ADWEC, ADDC and AADC, for which the relevant production costs are considered on a pass-through basis. The proposal however provides improved incentives for the distribution companies and for future non-standard tariff customers to manage their demand away from the system peak periods, thereby reducing their own costs and the sector costs as a whole.

The Bureau issued its decision on 7 April 2003 finalising the proposal. The 2003 BST prepared by ADWEC was based on the new BST structure for electricity. The estimated impact on the relative contribution of the Demand Charge and SMP Charges to total Electricity BST income between 2002 and 2003 is shown below:



Overall, and unrelated to the above changes, the average unit charge for electricity under the BST rose from 8.61 fils/kWh in 2002 to 9.68 fils/kWh in 2003. For water, the corresponding increase was from 11.43 AED/TG to 13.20 AED/TG. The main reasons for the increases were the commissioning of new capacity at GTTPC during 2002 and 2003, revised commercial terms arising from the privatisation of Umm Al Nar Power Company (now Arabian Power Company) in the summer of 2003, and weaker demand growth in 2003 than previously experienced.

In addition, the SMP charges have been simplified by grouping them into time of year and time of day bands, with (for electricity) higher SMPs in the summer than in the winter, and higher SMPs in the afternoon than in the morning. Again, this is likely to improve the cost reflectivity of the tariff and promotes the right economic signals.

The overall 2003 BSTs are as follows:

2003 BST Demand Charges		
Electricity	257.66 AED/kW	
Water	1388.23 AED/TG/Day	
2003 BST Electricity SMPs		
Fils/kWh	AM	PM
January – March	2.44	3.02
April – May	3.79	3.97
June – September	4.03	4.56
October - December	3.64	3.86
2003 BST Water SMPs		
AED/TIG	AM	PM
January – April	8.18	8.18
May - December	7.33	7.33



REVIEW OF DESPATCH OF GENERATION AND PRODUCTION

TRANSCO is responsible for despatching production plant according to an economic merit order. During 2003, the Bureau appointed consultants (IPA Energy Consulting, UK) to review TRANSCO's despatch process and performance in view of their licence and Transmission Code requirements and international practices.

IPA has acknowledged TRANSCO's efforts over the last two years to improve its despatch process, and one of its findings was that planned improvements (including the commissioning of a potentially sophisticated "unit commitment" model) should bring the process much closer to reflecting the commercial arrangements encapsulated within the Power and Water Purchase Agreements (PWPAs) between ADWEC and the production companies.

IPA also recommended a number of improvements to the extent of information TRANSCO should report to the Bureau to enable the Bureau better to assess whether or not the company is complying with its economic despatch licence obligation. The recommendations will be implemented during 2004.

CALCULATION OF SECTOR SUBSIDY REQUIREMENT

The accurate calculation of the sector subsidy requires audited data on the companies' income and the revenue drivers which determine their allowed revenues under the price controls set by the Bureau.

Significant progress was made during 2003, with the Bureau working closely with ADWEA and its consultants / auditors in the calculation of economic costs and subsidy requirements which are generally based on the Bureau's own review results.

APPROVAL OF TRANSCO'S 2004 TUOS STATEMENT

During the year and in accordance with its licence, TRANSCO submitted to the Bureau a draft Transmission Use of System (TUoS) charging statement for 2004. The Bureau approved the statement, which has now been issued to the distribution companies as the basis for TUoS charges in 2004. The approved charges are as the follows:

Approved 2004 TUOS Charges	
Electricity	212 AED/kW
Water	1,250 AED/TG/Day

The charges are levied according to the distribution companies' contribution to the peak demands on the electricity and water transmission systems.

The production and application of guaranteed and overall customer standards, for the distribution companies, has been one of the main developments during the year.

Consultation on finalising a range of standards, produced by the Bureau, has been undertaken in conjunction with all affected stakeholders, with a view to issuing appropriate standards during 2004.

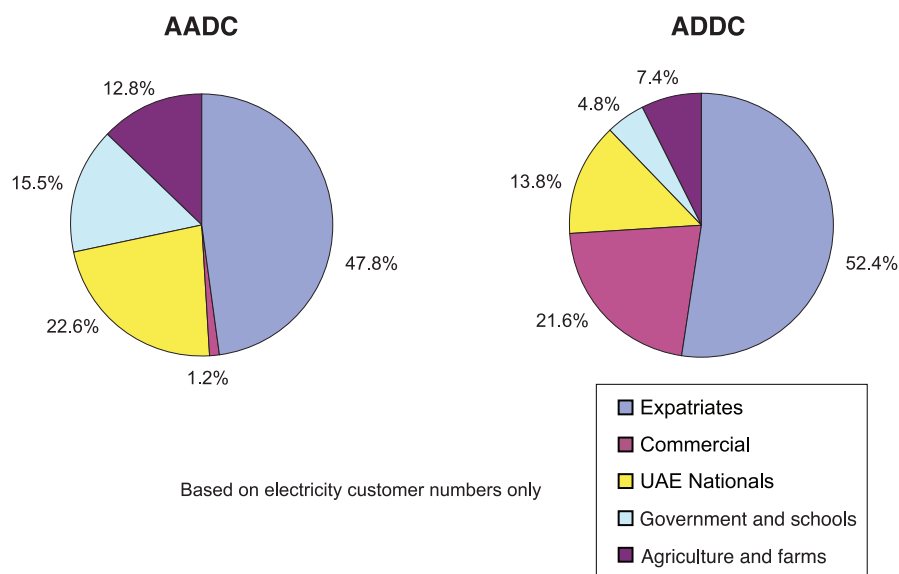
CUSTOMER REPRESENTATION

A more pro-active complaints resolution process has been introduced by requesting the distribution companies to provide the Bureau's contact details on the reverse of their bills. For the year as a whole the number of complaints against distribution companies referred to the Bureau has been small and will not be reported until the completion of a full year. In a number of cases customer complaints have been referred to the Bureau by the distribution companies for resolution.

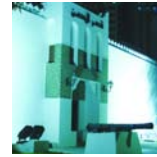
CUSTOMER POLICIES

Two key policies have been jointly developed between the distribution companies and the Bureau: one regarding non-payment disconnection guidelines and the other covering a consistent approach to the settlement of billing errors. Both documents will be published by the distribution companies as Codes of Practice and their performance against the Codes monitored by the Bureau.

The break down, by category, of the distribution companies' electricity customers is given below. In round terms AADC has 80,000 customers and ADDC approximately 190,000.



Bureau Specific Matters



ANNUAL WORK PLAN

A key element in our delivery strategy this year was the publication of our Annual Work Plan. This Plan is free to all licence holders and other stakeholders and sets out in detail the Bureau's work objectives for the immediate year ahead.

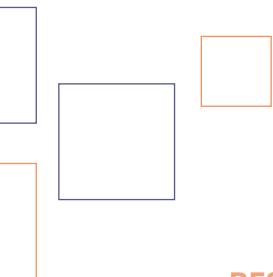
The Plan's programme is based on the following main overall objectives:

- To apply sound economic and technical regulation and supervision to all licence holders throughout the Emirate of Abu Dhabi's water and electricity sector.
- Ensuring full licensee compliance with all licence conditions, regulations, codes and other documents in force.
- Establishing sound documented management procedures for all Bureau functions.
- Representing the interests of all stakeholders in the water and electricity sector, especially customers.

RESOURCE ALLOCATION

Resource allocation against key deliverables as measured in terms of expenditure is given below as a percentage

Economic matters	25%
Technical issues	49%
Health, Safety and Environment	14%
Compliance – Customer delivery	12%



RESOURCES

During the year the Bureau actively recruited a number of key staff to help meet our overall objectives. New appointees included a Director of Technical Affairs, Electricity Manager, Customer Services Officer and two clerical support staff.

BOARD OF DIRECTORS

The Bureau Board of Directors held nine meetings during the year. The membership is as follows:

Zaal Mohammed Zaal Al Hameeri
Chairman

Nick Carter
Director General

Ibrahim Mubaydeen
Member

LINE DIRECTORS

The following staff are responsible for the day-to-day running of their respective directorates (They are not members of the Bureau Board):

Lindsay Hill
Director of Technical Affairs

Mark Clifton
Director of Economic Regulation

Sameh Nemer
Compliance and Operations Director

Regional Regulator's Forum

A Forum for regional electricity regulators has been established, mainly driven by the Egyptian and Saudi electricity regulators.

Other active members include: Bahrain, Lebanon, Jordan and Oman. The Bureau has attended a number of meetings and has helped promote the Abu Dhabi model to the participating countries.

Publications



Title	Document No.
Water Supply Regulations	(ED/R01/003)
Guide for the Water Supply Regulations (CD Rom)	(ED/R01/003)
Overview of the Emirate of Abu Dhabi's Water & Electricity Sector	(ER/P04/001)
Bureau Annual Work Plan 2003	(ER/P01/004)

Copies are available upon request - charges may apply.



PART 2

Financial Report

Auditors' Report

Balance Sheet

Statement of Cash Flows

Notes to the Financial Statements



Financial Report



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Hamdan Street
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AUDITORS' REPORT

TO THE BOARD MEMBERS OF THE REGULATION AND SUPERVISION BUREAU

We have audited the accompanying balance sheet of the Regulation and Supervision Bureau (the "Bureau") as of 31 December 2003, and the related statements of funding and expenditure, accumulated surplus and cash flows for the year then ended. These financial statements are the responsibility of the Bureau's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Bureau as of 31 December 2003 and the results of its operations and its cash flows for the year then ended in accordance with International Financial Reporting Standards.

Ernst & Young

22 June 2004
Abu Dhabi

A Member of Ernst & Young Global

BALANCE SHEET

31 December 2003

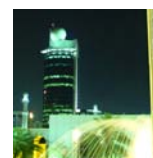
	<i>Notes</i>	2003 AED	<i>2002 AED</i>
ASSETS EMPLOYED			
VEHICLES AND EQUIPMENT	3	301,272	384,144
ADVANCE TO EMPLOYEES		157,500	262,500
CURRENT ASSETS			
Prepayments and other receivables	4	615,906	545,615
Bank balances and cash	5	<u>1,819,616</u>	<u>866,217</u>
		<u>2,435,522</u>	<u>1,411,832</u>
CURRENT LIABILITIES			
Accounts payable and accruals	6	<u>2,177,175</u>	<u>1,109,376</u>
NET CURRENT ASSETS		<u>258,347</u>	<u>302,456</u>
		<u><u>717,119</u></u>	<u><u>949,100</u></u>
FUNDS EMPLOYED			
Accumulated surplus		<u>157,487</u>	<u>605,500</u>
NON-CURRENT LIABILITY			
Employees' end of service benefits	7	<u>559,632</u>	<u>343,600</u>
		<u><u>717,119</u></u>	<u><u>949,100</u></u>



Zaal Mohammed Zaal Al Hameeri
CHAIRMAN



Nick Carter
DIRECTOR GENERAL



STATEMENTS OF FUNDING AND EXPENDITURE AND ACCUMULATED SURPLUS, Year ended 31 December 2003

	Notes	2003 AED	2002 AED
STATEMENT OF FUNDING AND EXPENDITURE			
FUNDING			
License fees	9	7,289,393	6,594,994
Other income		64,306	119,442
		7,353,699	6,714,436
EXPENDITURE			
Salaries and staff related costs		6,378,057	5,167,467
Depreciation	3	127,621	118,551
Others		1,296,034	919,900
		7,801,712	6,205,918
NET (DEFICIT) SURPLUS FOR THE YEAR		(448,013)	508,518
STATEMENT OF ACCUMULATED SURPLUS			
Balance at 1 January		605,500	96,982
Net (deficit) surplus for the year		(448,013)	508,518
Balance at 31 December		157,487	605,500

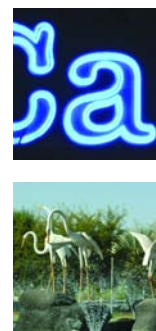
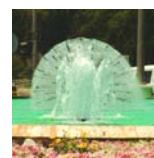
STATEMENT OF CASH FLOWS

Year ended 31 December 2003

	Notes	2003 AED	2002 AED
OPERATING ACTIVITIES			
Net (deficit) surplus for the year		(448,013)	508,518
Adjustments for:			
Provision for employees' end of service benefits		243,399	185,964
Depreciation		127,621	118,551
Net gain on sale of vehicles and equipment		-	(80,862)
Operating (deficit) surplus before working capital changes		(76,993)	732,171
Prepayments and other receivables		34,709	(420,298)
Accounts payable and accruals		1,067,799	(162,371)
Cash from operations		1,025,515	149,502
Employee's end of service benefits paid		(27,367)	(29,695)
Net cash from operating activities		998,148	119,807
INVESTING ACTIVITIES			
Purchase of plant and equipment		(44,749)	(430,154)
Proceeds from disposal of vehicles and equipment		-	93,473
Net cash used in investing activities		(44,749)	(336,681)
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS			
		953,399	(216,874)
Cash and cash equivalents at the beginning of the year		866,217	1,083,09
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR		1,819,616	866,217
Cash and cash equivalents comprise:			
Bank balances and cash		1,819,616	517,149
Bank deposits	5	-	349,068
		1,819,616	866,217

NOTES TO THE FINANCIAL STATEMENTS

31 December 2003



1- ACTIVITIES

The Regulation and Supervision Bureau ("the Bureau") for the Water and Electricity Sector in the Emirate of Abu Dhabi was established under Law no. (2) of 1998 to regulate the water and electricity sector in the Emirate of Abu Dhabi.

The Bureau is funded by the payment of license fees by those entities awarded licenses and is a not for profit organisation.

The total number of employees at 31 December 2003 was 18 (2002: 16). The Bureau's registered office is at P O Box 32800, Abu Dhabi, United Arab Emirates.

The financial statements of the Regulation and Supervision Bureau ("the Bureau") for the year ended 31 December 2003 were authorised for issue by the management on 22 June 2004.

2- SIGNIFICANT ACCOUNTING POLICIES

Basis of preparation

The financial statements have been prepared in accordance with Standards issued, or adopted, by the International Accounting Standards Board (IASB) and interpretations issued by the International Financial Reporting Interpretations Committee of IASB.

The significant accounting policies adopted are as follows:

Accounting convention

The financial statements are prepared under the historical cost convention. The accounting policies are consistent with those used in the previous year.

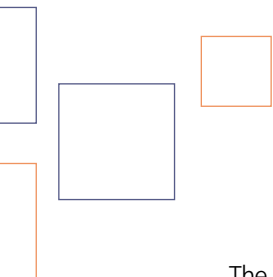
The financial statements have been presented in UAE Dirhams (AED).

Vehicles and equipment

Vehicles and equipment are stated at cost less accumulated depreciation and any impairment in value.

Depreciation is calculated on a straight line basis over the estimated useful lives of the assets as follows:

Motor vehicles	over 3 years
Software	over 3 years
Office equipment and furniture	over 5 years



The carrying values of vehicles and equipment are reviewed for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. If any such indication exists and where the carrying values exceed the estimated recoverable amount, the assets are written down to their recoverable amount.

Funding

Licence fees funding from the licensees in respect of the current year is accounted for in the Statement of Funding and Expenditure based on the amount of the cash expenditure incurred during the year. Any funding received in excess of the cash expenditure is deferred and included in accounts payable and accruals. Short funding is included in prepayments and other receivables as licence fees recoverable.

Accounts payable and accruals

Liabilities are recognised for amounts to be paid in the future for goods or services received, whether billed by the supplier or not.

Provisions

Provisions are recognised when the Bureau has an obligation (legal or constructive) arising from a past event, and the cost to settle the obligation is both probable and able to be reliably measured.

Employees' end of service benefits

The Bureau provides end of service benefits to its expatriate employees. The entitlement to these benefits is usually based upon the employees' length of service and completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment.

With respect to its national employees, the company makes contributions to Abu Dhabi Retirement Pension and Benefit Fund calculated as a percentage of the employees' salaries. The company's obligations are limited to these contributions, which are expensed when due.

Foreign currencies

Transactions in foreign currencies are recorded at the rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the rate of exchange ruling at the balance sheet date. All differences are taken to the statement of funding and expenditure.

Financial instruments

Financial instruments comprise other receivables, bank balances and cash, payables and accruals. The fair values of financial instruments are based on estimated fair values using such methods as the net present value of future cash flows.



3- VEHICLES AND EQUIPMENT

	<i>Motor vehicles AED</i>	<i>Software AED</i>	<i>Office equipment and furniture AED</i>	<i>Total AED</i>
Cost:				
At 1 January 2003	150,000	82,451	281,111	513,562
Additions	-	2,799	41,950	44,749
At 31 December 2003	150,000	85,250	323,061	558,311
Depreciation:				
At 1 January 2003	43,750	40,277	45,391	129,418
Charge for the year	50,000	17,311	60,310	127,621
At 31 December 2003	93,750	57,588	105,701	257,039
Net carrying amount:				
At 31 December 2003	56,250	27,662	217,360	301,272
At 31 December 2002	106,250	42,174	235,720	384,144

4- PREPAYMENTS AND OTHER RECEIVABLES

	2003 AED	2002 AED
License fees recoverable	30,995	-
Prepaid expenses	571,661	523,327
Other receivables	13,250	22,288
	615,906	545,615

5- BANK BALANCES AND CASH

Included in bank balances and cash is a bank deposit of nil (2002: AED 349,068) with a commercial bank in the United Arab Emirates. This deposit was maintained to cover the employees end of service benefits and was denominated in U.A.E. Dirhams with an effective interest rate of nil (2002: 2%). The management intend to transfer a proportion of the bank balances held at 31 December 2003, equal to the Bureau's end of services benefits liability, to deposits subsequent to the year end.

6- ACCOUNTS PAYABLE AND ACCRUALS

	2003 AED	2002 AED
Accounts payable	60,336	127,542
Accrued expenses	266,228	115,617
Deferred funding	-	866,217
License fees received in advance	1,850,611	-
	<u>2,177,175</u>	<u>1,109,376</u>

Accounts payable are normally settled within 30 days of the date of purchase.

7- EMPLOYEES' END OF SERVICE BENEFITS

The movements recognised in the balance sheet are as follows:

	2003 AED	2002 AED
Balance at 1 January	343,600	187,331
Provided during the year	243,399	185,964
Paid during the year	(27,367)	(29,695)
Balance at 31 December	<u>559,632</u>	<u>343,600</u>

8- RELATED PARTY TRANSACTIONS

These represent transactions with related parties, ie. the Abu Dhabi Water and Electricity Authority (ADWEA) and senior management of the Bureau. Pricing policies and terms of these transactions are approved by the Bureau's management.

Transactions with related parties included in the statement of funding and expenditure are as follows:

	2003 AED	2002 AED
Licence fees (note 9)	7,289,393	6,594,994
Water and electricity charges	88,937	-
Others	23,653	-

ADWEA has also provided to the Bureau, at no cost, certain general and administrative services.



9- LICENCE FEES

	2003 AED	2002 AED
Licence fees received during the year	8,242,792	6,378,120
Deferred income at beginning of the year	866,217	1,083,091
Deferred income at end of the year	-	866,217
Licence fees received in advance, net of recoverable fees	<u>1,819,616</u>	<u>-</u>
	<u>7,289,393</u>	<u>6,594,994</u>

10- EXPENDITURE COMMITMENTS

Capital expenditure commitments

At 31 December 2003, contracted capital expenditure amounted to nil (2002: AED 887,570).

11- FAIR VALUES

The fair values of the Bureau's financial assets and liabilities other than advances to employees, are not materially different from their carrying values at the balance sheet date.

12- RISK MANAGEMENT

Interest rate risk

The Bureau is not currently exposed to interest rate risk, as the majority of its monetary assets and liabilities are not subject to interest rate exposure. Deposits with banks are repriced frequently.

Credit risk

The Bureau collects licence fees from related parties. Licence fees are collected based on an annually forecast budget.

Liquidity risk

The Bureau limits its liquidity risk by monitoring its current financial position in conjunction with its cash flow forecasts and close communication with ADWEA on a regular basis to ensure funds are available to meet its commitments for liabilities as they fall due.

Accounts payable are normally settled within 30 days of the date of purchase.

Currency risk

Currency risk is limited since a significant proportion of Bureau's monetary assets, liabilities and transactions are in UAE Dirhams.

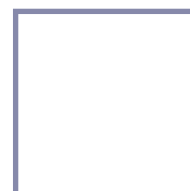
PART 3

Licensing Issues

Licence Holders

Licensing Issues

Consultation Papers



Licence Holders



شركة المرفأ للطاقة
Al Mirfa Power Company

Al Mirfa Power Company (AMPC)

Operates two power stations at Al Mirfa and Madinat Zayed with a total licensed capacity of 380 MW. Water production is at the Al Mirfa station only, with a licensed capacity of 38.7 MGD.



شركة الطويلة للطاقة
Al Taweelah Power Company

Al Taweelah Power Company (ATPC)

Operates two power stations at Al Taweelah complex with a total licensed capacity of 1,220 MW and 103 MGD for both B and B2 extension plants.



شركة أبوظبي للماء والكهرباء
Abu Dhabi Water & Electricity Company

Abu Dhabi Water & Electricity Company (ADWEC)

ADWEC is the single buyer of water and electricity output and capacity from producers under various power and water purchase agreements (PWPA) and charges the distribution companies for water and electricity, delivered by TRANSCO under a Bulk Supply Tariff (BST).



شركة العين للتوزيع
Al Ain Distribution Company

Al Ain Distribution Company (AADC)

Distributes and sells water and electricity to around 80,000 customers in the Municipality area of Al Ain



شركة أبوظبي للتوزيع
Abu Dhabi Distribution Company

Abu Dhabi Distribution Company (ADDC)

Distributes and sells water and electricity to around 190,000 customers in the Municipality area of Abu Dhabi.



Abu Dhabi Company for Servicing Remote Areas (RASCO)

Licensed to generate, desalinate, transmit, distribute and sell electricity and water in remote areas, not connected to either of the distribution networks.



Arabian Power Company (APC)

Forth IWPP in the Emirate, following the purchase of the Umm Al Nar Power Company's assets located at Sass Al Nakhl. Licensed capacities of 2,200 MW and 160 MGD reducing to 1,550 MW and 95 MGD after 2008.



شركة بنيونة للطاقة
Bainounah Power Company

Bainounah Power Company (BPC)

Operates two power stations at Mina (Abu Dhabi) and Al Ain. Total licensed capacity 1,001 MW and water production of 16 MGD.



Emirates CMS Power Company (ECPC)

Located at the old Taweelah A2 site, with licensed water capacities of 50 MGD and electricity of 763 MW.



Gulf Total Tracetebl Power Company (GTTPC)

Licensed capacities of 84.8 MGD of desalinated water and 1,431 MW of electricity.



Shuweihat CMS International Power Company (SCIPCO)

SCIPCo is licensed to produce up to 1,500 MW of electricity and 100 MGD of desalinated water from the Shuweihat S1 Plant, located 260 kms west of Abu Dhabi, near Jebel Dhanna. Full production is scheduled to commence in late 2004.



Transmission and Despatch Company (TRANSCO)

The company is responsible for all transmission voltages at 400, 220 and 132kV including despatch of generation units, water balancing and the bulk movement of water throughout the Emirate.



Umm Al Nar Power Company (UANPC)

Ownership of Baniyas power station with a licensed capacity of 120 MW.

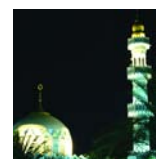


Union Water and Electricity Company (UWEC)

The Union Water and Electricity Company (UWEC) owns production facilities in the Emirate of Fujairah, located on the East Coast of the UAE. The company produces water and electricity for the Federal Electricity and Water Authority and water for the Emirate of Abu Dhabi. It is licensed by the Bureau for the bulk delivery and storage of potable water up to 100 MGD in the Emirate of Abu Dhabi.

(MW= Mega Watts, MGD = Million Imperial Gallons per Day)

Licensing Issues



NEW LICENCES

ED/L01/013	21 June 2003	Arabian Power Company Water Desalination and Electricity Generation Licence
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Granted to APC upon their acquisition of the existing Umm Al Nar Power Company's assets. From the date of issue until 31 December 2008; the desalination of water up to 160 MGD and generation of electricity up to 2,200 MW. Beyond 2008 the licence provides for maximum installed capacities of 95 MGD and 1,550 MW.

ED/L01/014	1 November 2003	Union Water & Electricity Company Bulk Delivery and Storage of Water Licence
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Issued to allow for the bulk delivery of potable water to the Emirate of Abu Dhabi of up to 100 MGD and the storage of such water of up to 100 MG.

CONSENTS

ED/L03/004	18 March 2003	Umm Al Nar Power Company Transfer of Assets to Transco
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Mainly associated with the transfer of an existing pump house.

ED/L03/005	16 April 2003	Umm Al Nar Power Company Limited Sale of Potable Water to Mitsui/Toshiba at UANPC site
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Time expired Consent related to the provision of water for soil investigation tests.

ED/L03/006	1 September 2003	Bainounah Power Company Sale of demineralised water to Specified Customers and Transco
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For the sale of up to 500 gallons per month to specified customers and 130,000 gallons per year to Transco for live-line washing purposes.

ED/L03/007	1 September 2003	Al Mirfa Power Company Transfer of Assets from Al Mirfa Power Company to Transco
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Transfer of pump-house assets to Transco.

ED/L03/008	1 November 2003	Gulf Total Tracetebe Power Company Asset Transfer Consent granted to GTTPC regarding the transfer of Assets
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The transfer of an access road to the Taweelah Shared Facilities Company.

EXEMPTIONS

ED/L06/001	8 April 2003	Abu Dhabi Water & Electricity Company Derogation (Specific) for Price Control One in respect of a Correction Factor Formula
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Amended ADWEC's price control formula that applied in the PC1 (1999-2002) period to change the treatment of interest payments regarding over/under recoveries under the Bulk Supply Tariffs.

MODIFICATIONS

The licence modifications listed below were necessary to give effect to the Price Control Two (PC2) changes for the period 2003-2005 inclusive.

ED/L01/005	1 October 2003	Transco Water and Electricity Transmission and Despatch Licence
ED/L01/006	1 October 2003	ADWEC Power and Water Procurement licence
ED/L01/007	1 October 2003	Al Ain Distribution Company Water and Electricity Distribution and Supply Licence
ED/L01/008	1 October 2003	Abu Dhabi Distribution Company Water and Electricity Distribution and Supply Licence

Modification to Umm Al Nar Power Company's licence to take account of the sale of assets to Arabian Power Company. Their licence relates to generation assets at a site in Baniyas of 120 MW.

ED/L01/003	1 July 2003	Umm Al Nar Power Company Revised Electricity Generation Licence
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Consultation Papers



CUSTOMER STANDARDS

Title

Document No.

Non-Payment Disconnection Policy Guidelines

(CP/R01/004)

These policy guidelines, issued to the two distribution companies, seek to establish a common approach regarding payment arrangements for customers who find it difficult to pay promptly. In addition the document also deals with adequate payment notices and establishes a consistent disconnection policy.

Settlement of Billing Errors Procedures for Distribution Companies

(CP/R01/005)

Issued to both distribution companies, covering metering or installation errors which may affect a meter reading. The document builds on procedures issued by ADWEA to both companies.

ECONOMIC

Large Scale Connections for Bulk Suppliers of Water or Electricity to the Transco Grid

(CR/L01/005)

With the potential entry of UWEC into the sector via the Transco water network and the eventual construction of the Emirates National Grid and the GCC National Grid the Bureau issued this paper in March 2003. It sought views on whether bulk-suppliers, situated outside the Emirate of Abu Dhabi, should be licensed or exempted from license. Following this consultation exercise the Bureau deemed licensing as the most appropriate way forward.

Proposed Change to the Structure of the Bulk Supply Tariff

(CR/E02/013)

This consultation paper set out proposed changes to the Bulk Supply Tariff, paid by the distribution companies to the single buyer ADWEC (Please refer to page 24 of this Annual Report).

Review of PWPAs and MEA Valuation for ADWEA-owned Generation and Desalination Companies

(CR/E02/014)

Since 1999 Power and Water Purchasing Agreements between ADWEC and ADWEA wholly owned producer companies were reviewed annually. In June 2003 a second discussion paper (CR/E02/016) was issued and from 2004 onwards the Bureau and ADWEC have moved to more longer-term PWPA arrangements.

REMOTE AREAS SERVICES COMPANY (RASCO)

Review of Economic Regulation of RASCO from 2004 (CR/E02/015)
(First Consultation Paper)

This major work-stream was undertaken by the Economies Directorate following the transfer of RASCO's distribution and supply assets to the two distribution companies.

Review of Economic Regulation of RASCO from 2004 (CR/E02/017)
(Second Consultation Paper)

Review of Economic Regulation of RASCO from 2004 (CR/E02/018)
(Draft Proposals – September 2003)

Review of Economic Regulation of RASCO from 2004 (CR/E02/019)
(Final Proposals – November 2003)

The final proposals are described more fully on pages 22 and 23 and will be implemented from 2004 onwards.

METERING

Metering and Data Exchange Code (MDEC) (CD/C01/002)
(Final Consultation)

The original Code, issued in 1999 was in need of a wide variety of updates.

The Code applies to all inter-company water and electricity metering including bulk gas supply metering and is a licence responsibility of Transco. The revised Code circulated by the Bureau was formally adopted by Transco and the MDEC working panel in the latter part of the year.

Metering Data Exchange Code (MDEC) DRAFT Guidelines and Procedures (CP/R01/003)
(A discussion document)

In conjunction with the issue of the MDEC Code, a draft Guidelines and Procedure Paper was prepared and issued by the Bureau. Defined Procedures included; MDEC Panel Rules, Sealing, Calibration and Testing, etc.



The Water Revenue Metering Regulations 2003

(CD/R01/003)

The Electricity Revenue Metering Regulations 2003

(CD/R01/004)

The MDEC Code does not currently incorporate standards and specifications for revenue metering, that is; metering between the distribution (or transmission) companies and the final customer. The above consultation papers will form the basis of any future revenue metering regulations issued by the Bureau.

TRANSMISSION CODES

Transmission Code Amendment (Final Consultation)

(CD/C01/003)

Water Transmission Code Amendment (Final Consultation)

(CD/C01/004)

Minor amendments proposed by the Transmission Code Panel members were circulated and eventually approved by the Bureau following a period of consultation.

WATER

The Water Quality Regulations - Amendment

(CD/R03/004)

Issued in the latter part of the year regarding further proposed revisions to the existing Regulations (Page 19 refers).

Water Supply (fittings) Regulations 2002

(CP/R01/002)

Issued in May 2003 to the distribution companies and came into force in October of the same year (Page 10 refers).



Regulation and Supervision Bureau
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