

A brief history of the Power and Water Corporation

2009

- Work to increase the capacity of Darwin River Dam by 20 per cent begins.
- Power and Water is awarded the Northern Territory's first Green Building Council of Australia Green Star rating for its Ben Hammond Project, an expansion at our operational headquarters.
- The Owen Springs Power Station, 25km out of Alice Springs, is commissioned
- A review of Power and Water's financial sustainability recommends tariffs increase over a number of years to be more cost-reflective.
- Work begins on the Archer Zone Substation and a new 1,000mm water main to support growth and new suburbs in the city of Palmerston.
- Judith King is appointed chairman of the Board of the Power and Water Corporation, after its first Chairman Neil Phillips retires.
- Power and Water's major power stations receive first gas from the Bonaparte Basin offshore, the start of a 25-year gas supply contract.
- We launch Territory GreenPower, giving customers the opportunity to help invest in renewable energy technologies.

2008

- The Corporation announced and embarked on a major infrastructure investment plan valued at more than \$1 billion.
- Work begins on the new Archer Zone Substation, to secure electricity supply to the growing city of Palmerston.
- Weddell Power Station is constructed and commissioned, with two 44MW gas turbines.
- Cyclone Helen, Category 1, hits the Top End in January, damaging powerlines and disrupting services.
- A severe storm in September damages power networks in Alice Springs, launching a 48-hour around-the-clock effort to cut back trees from powerlines and repair damage to restore services.
- A series of power outages in Darwin's northern suburbs leads the Corporation to announce the Remedial Asset Management Plan, a comprehensive inspection and maintenance program of electricity networks infrastructure.
- A project to relocate the Larrakeyah outfall is launched, including upgrades at the Ludmilla wastewater treatment plant.

2007

- Tenders to construct the new \$57 million Owen Springs Power Station at Brewer Estate advertised.
- \$10.6 million contract awarded to construct Territory's first Green Building at the Ben Hammond Complex in Stuart Park.
- Darwin Water Story – Power and Water undertakes major water management survey.
- Andrew Macrides appointed new Managing Director of the Power and Water Corporation.
- Low flying choppers scout high voltage power lines as part of a new maintenance initiative by the Power and Water Corporation.
- Government announces \$814 million asset investment funding.
- Work begins on \$10 million Alice Springs Water Re-use project to recycle waste water for horticulture and irrigation.

2006

- Power and Water achieves a Territory first by gaining simultaneous triple certification for internationally recognised standards.
- A category five cyclone causes damage to power, water and sewerage infrastructure in remote communities including Maningrida, Oenpelli and Jabiru in late April.
- Power to 100 homes is disconnected after flooding isolates Katherine. Power and Water achieves a Territory first by gaining simultaneous triple certification for nationally recognised standards in Occupational Health and Safety, Environmental Protection and Quality of Products and Services.
- Power and Water signs a Gas Sales Agreement with ENI to purchase gas over the next 25 years.
- Power and Water signs a Gas Transportation Agreement with the Australian Pipeline Trust to construct a gas pipeline to bring the gas from the Blacktip Field in the Bonaparte Gulf to the existing north-south gas pipeline.
- Power and Water enters a six-year agreement with Charles Darwin University for training services.
- Work starts on building the Frances Bay Zone Substation, which will help secure electricity supply for the Darwin CBD.
- Dundee Beach residents can turn on town power for the first time.
- Alice Springs records its highest peak power demand on record, at 52.6MW on 6 February.
- Customer Service Centre, Call Centre and Corporate Headquarters moved to Mitchell Centre, Darwin.

2005

- Territorians living along Woolianna Road, near Daly River, connect to reticulated power for the first time.
- Renewable energy is purchased from the Territory's first methane gas power plant at Shoal Bay Dump.
- The Tennant Creek Power Station is upgraded with the addition of a 4.1MW Taurus 60 gas turbine generator.
- A water tank with capacity of 1.8 million litres is built at Lajamanu. It is the largest water tank to be built in a remote community in the Northern Territory.
- A one-off \$50 payment is offered to customers affected by billing errors arising from the introduction of the Corporation's new billing system in August 2004.
- The first power poles are removed in March, as part of the Nightcliff Undergrounding Power Project.
- A 10.1MW Titan 130 gas turbine is installed at Ron Goodin Power Station.
- The 160kW solar power station, based on dish concentrators that follow the sun, commences commercial production at Hermannsburg.
- Biodiesel is trialled as a fuel at Daly Waters Power Station.
- All infrastructure across Power and Water sites is audited to ascertain levels of asbestos, and asbestos is isolated and removed for the health and safety of staff.
- Stage One refurbishment of the Ben Hammond Complex in Darwin is completed.

2004

- The Public Environment Report is conducted for the Water Reuse in the Alice project.
- A new motorhome effluent dump point opens in Alice Springs.
- Solar and wind powered streetlights are trialled at Imangara, a remote community near Tennant Creek.
- Tennant Creek residents hold a Referendum to vote on the issue of chlorinating water supply with the result not to chlorinate water.

- Power and Water sponsors Engineering Chair at the Charles Darwin University.
- Solar dishes are progressively installed at Hermannsburg, Lajamanu and Kalkarindji.
- Two Solar Taurus 4.1MW gas turbines are installed at Ron Goodin Power Station in Alice Springs.
- A new fully-integrated Retail Management System providing advanced billing capabilities was introduced.

2003

- Power and Water launches its Melaleuca Awards for Environmental Excellence.
- A Digital radio communication system is completed between platforms and floating storage in the Bayu Undan gas field. The \$500,000 project is a joint venture between Integrated Technology Systems and Power and Water.
- Two Power and Water staff are seriously injured while working at Mount Bundy.
- The communities of Bulman in Arnhem Land and Kings Canyon in Central Australia test the viability of flat-plate solar photovoltaic technology to reduce the need for diesel-powered generators.
- Water Reuse in the Alice is launched. This \$6.2 million project will return Ilparpa Swamp to a more natural state with fewer weeds and mosquitoes, re-use water and reduce overflows in the area.
- A 225kW flat plate photovoltaic solar power plant was commissioned at the Kings Canyon Resort Alice Springs.

2002

- The Power and Water Corporation (Power and Water) is created, becoming the first government-owned corporation in the Northern Territory, on 1 July 2002.
- NT Power exits the market.
- The Darwin and Katherine electricity system recorded a new peak demand level of 224.3MW on 23 October.
- A public forum is held in Tennant Creek to discuss the future of adding chlorine to the water supply.

2001

- Power and Water Authority (PAWA) receives national recognition for improved electricity network reliability from the Electrical Supply Association of Australia (ESAA). We move ahead of Western Australia, Tasmania and Queensland for network system reliability.
- The Utilities Commission takes on regulatory responsibility for water and sewerage.
- Government Owned Corporation Legislation passes in the Northern Territory Legislative Assembly in November.
- PAWA starts purchasing Renewable Energy Certificates from solar hot water systems.

2000

- Darwin to Katherine Transmission Line is purchased by PAWA.
- The electricity market is opened to competition under federal legislation, and the Utilities Commission is formed to regulate the electricity industry. NT Power enters the market.
- New generators are commissioned at Tennant Creek and Yulara Power Stations.
- Set 7, a gas turbine, is commissioned at Channel Island Power Station in June.
- Inaugural Safety Week held in October.
- The PAWA Board is appointed in April.

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- 1999**
- PAWA staff help restore water supply, electricity generation and transmission works in East Timor, following the destruction of this infrastructure. PAWA staff prepare a report outlining the priorities for the United Nations to upgrade the water supply.
 - The PAWA Environment Report is produced for the first time.
 - Extensive Y2K preparations are finalised for the transition to the new millennium.
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- 1998**
- Floods in Katherine cause extensive damage to the town. PAWA staff help restore essential services in and around Katherine, and help with major clean-up operations.
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- 1997**
- Design begins on the Channel Island Power Station ice plant which commences service in 1998. The ice plant is a first in the world. Ice is made overnight and used during the day to maximise efficient use of energy. Cold water circulated through the ice plant is used to cool the air going into the turbines.
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- 1996**
- PAWA releases the Darwin Sewerage Strategy to plan for future growth and environmental requirements.
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- 1995**
- The McArthur River Mine, near Borroloola, is supplied with power in March. A power station is established at the mine site and supplied with natural gas via a pipeline constructed from the existing north-south gas pipeline at Daly Waters.
 - A combined cycle power plant is commissioned in Pine Creek.
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- 1992**
- Darwin's water supply is chlorinated at Darwin River Dam.
 - The first Customer Information System to integrate electricity, water and sewerage billing is implemented across the Northern Territory.
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- 1990**
- A second 1,300mm pipeline is constructed from Darwin River Dam to McMinns Water Treatment Storage Facility.
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- 1989**
- Manton Dam is placed in reserve and the dam is opened for recreational use.
 - The 132kV power line to link Channel Island Power Station with Katherine and Pine Creek Power Stations is commissioned.
 - Yulara Power Station is converted to operate on liquefied natural gas (LNG).
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- 1987**
- Power and Water Authority (PAWA) is created by merging the Northern Territory Electricity Commission with the Northern Territory Water Authority.
 - Stokes Hill Power Station is closed.
 - Gas turbine generators are commissioned in Alice Springs, Tennant Creek, Katherine and the new Channel Island Power Station.
 - The 132kV line to Katherine was built. It is the first privately owned power line in Australia. PAWA pays to use the line.
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- 1986**
- Channel Island Power Station opens, with natural gas as the fuel source. The gas is piped along a purpose-built pipeline from Central Australia's Palm Valley and Mereenie gas fields.
 - Hudson Creek 132kV Terminal Station is completed along with the cyclone rated 132kV transmission lines from Channel Island.
 - Contract is awarded for construction of gas turbine at Channel Island Power Station in Katherine.
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- 1985**
- The new state-of-the-art System Control centre is commissioned at Hudson Creek.
 - Fibre optic communications (some of the first in Australia) are used between System Control and the zone substations. A microwave link is established to Channel Island in addition to fibre optic embedded in the overhead earth wire.
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- 1984**
- Government decides to use natural gas fuel, rather than coal, at Channel Island Power Station, with natural gas piped from the Amadeus Basin in Central Australia.
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- 1983**
- New pumping station is constructed at McMinns and two vertical shaft-driven are pumps installed.
 - Palmerston water tank is constructed.
 - First use of reclaimed water for irrigation purposes.
 - First supply of natural gas is made to Alice Springs Ron Goodin power station via a 150km pipeline from Palm Valley field.
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- 1982**
- Yulara Power Station is commissioned, with total capacity of 2,600kW.
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- 1981**
- 66kV XLPE cable is used to connect Vanderlin Drive to Casuarina Zone substation. This is the first use in Australia of a solid insulant cable in a transmission system.
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- 1980**
- Water pumping station and treatment plant is completed at Donkey Camp, Katherine.
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- 1979**
- Berrimah gas turbine station is commissioned, following a series of failures at Stokes Hill power station that had led to commissions of enquiry.
 - Underground cables are installed to connect the cyclone proof generators to the new underground suburbs of Anula, Wulagi, Malak and Karama (seen as being dormitory suburbs in the event of another cyclone).
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- 1978**
- New state-of-the-art mobile radio system introduced for our crews using solar power at remote repeater sites.
 - Ludmilla Wastewater Treatment Plant commissioned.
 - Northern Territory Electricity Commission is established as part of self-government on 1 July 1978. The first Commissioner is Max Dryer, who came from ELCOM in New Guinea. Prior to the formation of NTEC construction, operation and maintenance of the power and water systems were performed by the Commonwealth Department of Works. Collection of revenue was performed by the NT Administration. There was minimal reconciliation of revenue and expenditure.
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- 1975**
- A massive effort is needed to totally rebuild the Darwin power system after Cyclone Tracy destroyed it. Initially efforts are directed at simply re-establishing supply, followed by a full rebuild to stronger standards over three years. A decision is made to underground all new suburbs - this did happen at Anula, Wulagi, Wanguri and Tiwi.
 - Tennant Creek Power Station is commissioned, replacing private power supply by Peko Mines.
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- 1974**
- On Christmas Eve, Cyclone Tracy completely blacks out Darwin. Stokes Hill Power Station is closed down at 3.30am on Christmas morning. Rainwater and salt water drench the power station. Water is an immediate issue, with supply being restored from Manton Dam. In response to a telegram on Boxing Day, 31 interstate electricity authorities arrive to help, with the first crews arriving from Townsville, Queensland, and the Blue Mountains, New South Wales.
 - First gas turbine generator in NT installed at Darwin.
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- 1973**
- City Zone substation constructed in Darwin. During this time load was growing at 17 per cent per annum.
 - The 11kV cable tunnel in Darwin CBD is constructed.
 - The new Sadadeen Valley power station is commissioned in Alice Springs. It is renamed Ron Goodin Power Station (RGPS) in 1981 to honour its first superintendent who was instrumental in local fuel sources (crude oil and natural gas) for power generation.
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- 1972**
- Darwin River Dam and Katherine Water Treatment Plant are commissioned. The capacity of Darwin River Dam is 259,000mL, with an annual yield of 38,000mL.
 - A new diesel power station is commissioned at Tennant Creek. Before 1972, power for the town was purchased from the Peko Mines power station east of the town.
 - Elevated 1mL water storage tank is constructed at Casuarina with an associated 10mL ground level storage.
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- 1971**
- Ludmilla sewage treatment plan proposed with construction to be completed by 1975.
 - Casuarina Zone Substation is built to service the rapidly developing northern suburbs of Darwin.
 - Two Allen generating sets are commissioned in a new building next to the Sadadeen Valley Power Station. The sets will eventually be transferred to the Katherine Power Station.
 - Reticulated sewerage scheme begins in Tennant Creek.
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- 1970**
- Darwin Central Zone Sewerage Scheme introduced.
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- 1969**
- Leanyer sewerage ponds are commissioned.
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- 1968**
- Armidale Street Power Station closed down.
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- 1966**
- McMinns borefield is commissioned to supplement the Manton Dam supply to Darwin.
 - McMinns Zone substation is established to service Darwin's rural hinterland. A long 2kV feeder supplies the Humpty Doo Rice project and Stan Kennon's crusher at Mount Bundy.
 - Water in harbour in Darwin Harbour is monitored for levels of pollution attributed to sewage disposal.
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- 1965**
- Water pumping station and storage reservoir constructed at McMinns.
 - Entire Alice Springs water supplied from Mereenie Basin.
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- 1964**
- New pumping equipment installed at Manton Dam to increase production rates.
 - Ground water from the Mereenie Basin is brought into use for Alice Springs.
 - Natural gas discovered at the Mereenie field southwest of Alice Springs and a year later at Palm Valley.
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- 1963**
- Capacity to supply from Manton Dam is reached and bores are drilled at McMinns borefield.
 - Sewerage pump stations are constructed at Rapid Creek and Lakeside Drive. Plans are developed for waste material pumped to Leanyer Treatment Ponds.
 - Tennant Creek water is supplied from the Cabbage Tree Gum ground water supply south of the town.
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- 1962**
- Stokes Hill Power Station (Stage 1) is completed, with generating capacity of 15MW (15,000 kilowatts) and diesel engines give way to steam powered turbines.
 - Tennant Creek's new reticulated water system opens, supplied from Cabbage Gum Bore.
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- 1961**
- Alice Springs sewerage system starts.
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- 1957**
- Second extension of the Alice Springs Power Station building is constructed to accommodate a three cylinder 529kW Mirrlees generator.
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- 1954**
- The Alice Springs Power Station building is extended to provide space for the installation of additional generating sets. Peak demand is reported at 750kW.
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- 1953**
- Peko Mines supplies Tennant Creek with power.
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- 1952**
- The Alice Springs Power Station has additional plant installed to cater for a town maximum demand of 500kW.
 - Katherine water supply is augmented by DCA bore.
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- 1951**
- Tennant Creek Town Dam is completed.
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- 1950**
- Sewage disposal facilities are established at independent zones around Darwin. Outfalls at Nightcliff and Larrakeyah pump raw sewage to the harbour.
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- 1946**
- Reticulated water supply is made available to Darwin residents.
 - Water from Tennant Creek's No 7 bore is treated and piped to town's water supply.
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- 1945**
- Electricity generators are set up in Darwin, Alice Springs, Katherine, Tennant Creek and Adelaide River following the withdrawal of the military, which had provided essential services.
 - Alice Springs Bath Street Power Station closes, with all power generation now located in the Sadadeen Valley.
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- 1944**
- Water starts flowing from the Manton Dam to Darwin. With a regular water supply, flush toilets are finally possible.
 - Howard Springs weir is constructed by the military. A second pipeline with a 375mm diameter is installed from Manton Dam.
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- 1942**
- Alice Springs has its second power station constructed (220kW) and located in the Sadadeen Valley as the result of an increase in demand from civilian population and 4,600 service personnel.
 - After the bombing of Darwin on 19 February, most of the civilians are evacuated. Electricity generation and distribution becomes a military matter until after the war.
 - An anti-torpedo net is constructed across Manton Dam.
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- 1941**
- Water is pumped from Manton Dam to Darwin, for military purposes. One of the pipes was owned by the Navy and it continued on its asset register until self-government in 1978.
 - Alice Springs Bath Street Power Station is extended to accommodate another two generating sets to bring the total generating capacity to 182kW.
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- 1940**
- Additional water storage tanks are constructed and first sections of reticulation installed.
 - A second power station is established at Bishop Street to cope with the increasing military load and to provide diversity.
 - A third 78kW generating set is commissioned at the Alice Springs Bath Street Power Station, bringing the town capacity to 118kW. Alice Springs maximum demand is between 40kW and 44kW.
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- 1939**
- The completed northern portion of Manton Dam pipeline is supplied with water from temporary weir and pump at Howard Springs.
 - Five steel elevated water storage tanks are completed around Darwin. A ground level tank is erected at Stokes Hill and the elevated water control tank constructed at RAAF Base Darwin.
 - A large power station is constructed in Armidale Street, and is later sandbagged to protect it from air raids. It served Darwin until 1970.
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- 1938**
- Contract is let for the construction of Manton Dam wall.
 - New houses at Myilly Point have septic tanks installed.
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- 1937**
- Electricity supply is transferred to the Commonwealth Works and Services Branch, with a staff of five. Commercial customers now consist of Northern Standard Newspaper, Ice and Cold Storage, EW Hansen Welding, Darwin Hospital, Health Laboratory, Public Works Department, JW Young Battery Charging, the radio station, the Kyriakos Zero café and the Don Hotel.
 - The Commonwealth decides to establish a public electricity supply in Alice Springs and a power station is built and fitted with two 20kW generating sets supplying a newly built reticulation system connected to six government buildings and streetlights.
 - Initial survey work is completed at Manton Dam.
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- 1936**
- In March, a cyclone destroys Darwin's entire electricity supply, requiring repairs for 60 pounds to poles, streetlights, mains and service cables. All service is restored by the end of the week.
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- 1935**
- Electricity reaches Darwin Hospital at Myilly Point, and modern medical equipment becomes possible. Water is supplied to the hospital from the Montoro Street tank.
 - Tennant Creek is provided with Government bores for town water supplies at Seven Mile Creek.
 - Estimates requested to establish a reticulated water supply from Berry Springs to Darwin.
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- 1934**
- The Darwin City Council builds a power station in an area bordered by Woods and Lindsay Streets and provided for "the construction and purchase of water works, gas works and electric light works". The Council also offers refrigerators and fans for sale to the public.
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- 1931**
- Water supply for Palmerston (Darwin) residents is drawn from private wells and the Railway Dam.
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- 1929**
- Four hundred and twenty six Darwin residents petition the Minister for Home and Territories requesting a permanent water supply.
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- 1926**
- A steam-driven water-pumping station is set up on bank of Katherine River.
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- 1923**
- Local businessman Felix Holmes signs an agreement that gives him the rights to produce power for Darwin for five years. His original power plant is in Smith Street, on the site now occupied by the Darwin Plaza.
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- 1922**
- The Government Freezer and Cold Store finally breaks down. The generating plant worked until 23 April 1923, when Felix Holmes is contracted to supply Darwin's electricity. Holmes runs coal-fired suction gas engines to supply electricity for six hours a day.
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- 1917**
- Vestey's Meatworks are established at Bullocky Point in Darwin with concrete ground level rainwater tanks. Water is used for drinking and for washing down the slaughtered beasts.
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- 1912**
- A private entrepreneur, Ernest Felix Holmes, and the Government establish a small power plant, cold-store/freezer in the railway yards in Darwin. This provides ice, storage for perishable foods, and supplies power to Government offices. Holmes' first engine generates 25kW.
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- 1894**
- The “one mile” railway dam (constructed in 1887) is gazetted. It becomes polluted from drainage running off from the city down through Frogs Hollow. Its primary purpose is to serve steam locomotives.
 - The “three mile” railway dam (just north of the Woolner Road roundabout at City Valley Estate) is gazetted as a water reservoir. It supplies the railway workshops at Parap (the site now occupied by Power and Water Corporation since 1978).
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- 1888**
- Township of Stuart (Alice Springs) is proclaimed.
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- 1886**
- Work commences on the Palmerston to Pine Creek railway with bores, pumps and tanks being constructed along the line.
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- 1884**
- Tennant Creek Stock Well is completed.
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- 1871**
- Alice Springs is discovered by William Whitfield Wills.
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- 1869**
- Palmerston (Darwin) is founded. Wells are sunk at Stokes Hill and Doctor’s Gully to provide water for the Fort Hill camp. Peel’s Well at Doctors Gully is to become the settlements main source of water.
 - Sanitation is not considered at this time.
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Acknowledgements:

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Thanks also to the many long-serving Power and Water staff members who contributed to this page.