

## 100 Years Strong

*A historical timeline of the beginnings of electric generation in Medicine Hat to the current day*

- 1883**      **Gas discovered by accident at CPR Siding No. 8 at Langevin, near Medicine Hat**
- 1898      Medicine Hat incorporated as a town
- 1895      Population 1,000  
Explorations begin to search for gas deposits. Gas discovered at 1,010 feet, 600 psi  
The House of Commons passes the Autonomy Act creating the provinces of Alberta and Saskatchewan
- 1906**      Medicine Hat incorporated as a city
- 1907      Rudyard Kipling travels through Medicine Hat and remarks that it has “all hell for a basement”
- 1910-1911      Two generators with a combined capacity of 600 kW are placed in the power plant at a cost of \$25,000. Fuel is supplied by a gas well near the plant and power is transmitted to the first substation on Mill Street  
Bylaw passed to install an electric light and power system  
Population reaches 5,000
- 1912      Power Plant expands with the addition of two Fraser-Chalmers turbo-generators each with 750 kW capacity  
Cheapest power in all of Canada attracts industry including Ogilvie and Medalta Pottery  
On a return visit, Kipling calls Medicine Hat the “town that was born lucky”  
First lights installed on city streets
- 1913      Industrial boom peaks and population exceeds 15,000. Industries include pump and brass manufacturing, concrete products, crayons and cigars
- 1914      1,500 kW Westinghouse turbo-generator added
- 1917      Electric Worker’s Act highlights worker safety with the addition of rubber gloves, first aid kits and a resuscitator to the tool box  
Economic downturn causes industry closures and a population drop. The need to increase utility revenue initiates a residential marketing campaign
- 1918**      City grid expanded to attract more customers
- 1919      13.8 kV transmission line built to Redcliff, primarily to service Dominion Glass
- 1921      Plant expansion includes a 500 horsepower Babcock and Wilcox boiler, transmission lines and meters
- 1924      Residents are asked to turn on veranda lights for street lighting. Wiring for this light bypasses the meter so consumers are not charged for power  
Public Utilities Act passed
- 1929      Addition of 3,000 kW turbo generator  
Chamber of Commerce petitions City Council for increase power in order to attract industry
- 1930      Commitments to regular maintenance and upkeep ensure that plant equipment remains operational and outages are minimal during financially difficult times for both the utility and community

- 1940 Service Flight Training School No. 34 established near Medicine Hat. City is contracted to supply utilities.
- 1941-1943 Peak load demands reach plant capacity. A second hand generator from Winnipeg is installed to address demand as part of efforts to find interim solutions until post war production resumes and the new generator on order can be delivered
- 1947 Redcliff distribution system constructed and a 5,000 kW turbo generator is installed
- 1950s** Demand exceeds 7,000 kW  
Population reaches 17,000 with post war surge of residential and commercial development. First traffic lights installed at the intersection of 2<sup>nd</sup> and 3<sup>rd</sup> Streets and 6<sup>th</sup> Avenue  
Calgary Power begins to evaluate production capacity, surpluses and future demand especially related to irrigation farming  
Canada Land Irrigation Development looks at the importance of rural electrification
- 1951-1953 Addition of 300 kW generator and steam turbine at the Power Plant as part of the Calgary Power Agreement  
The City of Medicine Hat and Calgary Power sign an agreement sharing the cost of a new 30 MW generator. As part of this agreement, new transmission lines are established and the City Utility is connected to the power grid
- 1956 Kensington becomes the first neighborhood in Canada to be serviced underground
- 1958 Supplementary agreement signed with Calgary Power for standby protection and firm power needs
- 1960 First bucket truck purchased by the utility, improving the productivity and safety of linemen  
City begins work on the underground network in the downtown core
- 1962 City begins renovation of street lighting system eliminating the use of veranda lights
- 1970s** Installation of a new 17 MW generator unit and boiler at Brier Park  
Plant capacity reaches 55 MW  
Resisting provincial pressure, the City looks to add capacity to meet load growth while at the same time reduce heavy standby charges being levied by Calgary Power  
Provincial policy, led by the Energy Resource Conservation Board (ERCB), discourages the use of gas and mandates coal fired power generation for Alberta. Pressure is placed on Medicine Hat to abandon its utility, which relies on natural gas and buy power from the grid  
World oil crises cause prices to soar and Alberta, including Medicine Hat, experiences an economic and industrial boom
- 1979** Medicine Hat becomes the first utility in Canada to pair gas turbines and Heat Recovery Steam Generators (HRSG) to create a combined cycle system. By recapturing waste heat to produce more energy, the plant becomes more efficient and reliable  
Capital initiative decisions are made to reduce / avoid increasing gas consumption
- 1980 National Energy Program, Federal Tax applied to natural gas sales results in increased gas and electrical rates
- 1982 The "Principality of Medicine Hat" is established with a negotiated exemption from the Electric Energy Marketing Act (EEMA)  
EEMA passed to regulate electrical rates throughout the province
- 1984 69 KV ring transmission system completed supported by 4 main substations. Security of supply within the Medicine Hat grid is strengthened
- 1985 Supervisory Control and Data Acquisitions (SCADA) system implemented to monitoring of the transmission system
- 1991 Phase I of plant expansions, two combustion turbines added along with two Foster Wheeler HRSGs  
The ERCB tries to block plant expansion citing surplus power available on the grid. Equipment purchased in 1989 does not come on line until 1993 while Medicine Hat is required to purchase additional power

- 1995** The City reaps the benefit of high Power Pool prices by selling surplus power to the grid  
Electric Utilities Act results in a move away from government regulated electric market to an open, competitive pool market, Medicine Hat retains exemption status
- 1996 Phase II of plant expansion completed included a new 33 MW steam turbine  
Agreement with Transalta (formerly Calgary Power) for backup power ends
- 2000 Agreement reached with Cancarb to purchase power created through co-generation
- 2001 The City again benefits from selling surplus power to the grid  
High power prices in the province lead to further deregulation of the industry
- 2003 Older unit replaced with a General Electric LM6000 DLE (dry low emission) gas combustion turbine and HRSG  
Amendments to the Electric Utilities Act creates a PiLOT (Payment in Lieu of Taxes) for Medicine Hat in a move to level the playing field
- 2006 City contracts delivery of 14,040 MWhs of wind power through Vision Quest agreement  
First electronic revenue demand meters with communications are installed
- 2006-2007 Installation of tow replacement turbines which include dry low emissions plus (DLE+) technology to reduce emissions and increase efficiency. A third is added in 2009
- 2010** First bi-directional electronic revenue meters installed for customers with distributed generation  
New Power Plant office building opened  
Medicine Hat Electric Utility celebrates 100<sup>th</sup> Anniversary
- 2014 Through a Power Purchase Agreement with Box Springs Wind Corporation, three wind turbines are erected on the City's north side.  
Through this arrangement the City receives the carbon credits from the project which can be used to offset emissions from the City's power plant
- 2017 Unit #16, a simple cycle LM6000 generator is built on the City's north side, officially online in November