

Unit 16: The City's Newest Power Plant

Officially Opened November 2, 2017 by His Worship Mayor Ted Clugston

UNIT 16 FACTS

- New 43 Megawatt GE LM6000 Gas Turbine Generator provides backup generation if the City's largest generating unit goes offline
- Meets Alberta Utilities Commission guidelines for electrical generation capability
- Strategically located away from the Main Power Plant to ensure security of City's electrical supply during upset conditions
- Capable of providing enough power for about 14,000 Medicine Hat homes annually



Power Supply in the City of Medicine Hat		
Current maximum supply	203 MW	If the City's largest unit was to go offline, the total supply would be 148 MW (203 – 55 MW)
Largest generating unit	55 MW	Power Plant located on the South Saskatchewan River in the City's SW, near Gas City Campground
New LM6000 Generating Unit	Adds 43 MW to the system	Total maximum supply is now increased to 246 MW
Peak demand in summer	170 MW	The addition of a new generator ensures adequate supply to the City's customers and current / anticipated economic growth (246 MW – 55 MW = 191)

SPRING–FALL 2016

- June 7, 2016 Sod turning
- Access road to the site completed
- Generator factory tested
- Excavation, retaining wall, piling and foundations completed



WINTER 2016

- LM6000 GE Turbine, fans and housing arrive from Houston, Texas just before the New Year
- Construction of structural steel begins
- Process Building, stack and turbine foundation underway



SPRING 2017

- All LM6000 equipment deliveries completed
- Glycol chillers received and set
- All structural steel installed
- High pressure gas line pipe materials received



SUMMER/FALL COMPLETION

- Final stages of construction are completed
- Connection of 16L transmission line to the new MHS-16 Substation
- Substation energized in July
- Gas flaring to clear and prepare lines for operation
- Preparation for Grand Opening November 2, 2017



STATISTICS

- 120,000 contractor man hours on site
- 1000 Tailgate meetings
- Over 431 Safety meetings
- 350 people received Site Orientation
- Zero lost time injuries on this project to date



PROJECT MANAGEMENT AND ENGINEERING CONSULTING

AVAL Engineering
Orbis

Worley Parsons
AMEC

Upside
Engineering



KEY CONTRACTORS

Dynamic Industrial
Solutions

Keller Canada

Wright Construction

GVN

Pronghorn Controls

GENERAL ELECTRIC

(manufacturer of LM6000 gas turbine)

CITY OF MEDICINE HAT STAFF