



UNIT 1

Generator

- Supplier — TES located in the Czech Republic
- Capacity — 8,032 kW, 10,770 hp
- Weight — 101,200 pounds

Turbine

- Supplier — Andritz Hydro located in Montreal, Canada
 - Runner fabricated in France
 - Draft tube fabricated in Portugal
 - Bearings fabricated in Germany
- Turbine Max Flow Rate — 300 ft³/sec (134,600 gpm)
- Max Head — 328 feet or 142 psi
- Turbine Diameter — 49 inches
- Turbine Weight — 48,000 pounds
- Supply Pipe Diameter — 72 inches



UNIT 2

Generator

- Supplier — TES located in the Czech Republic
- Capacity — 3,304 kW, 4,430 hp
- Weight — 20,800 pounds

Turbine

- Supplier — Andritz Hydro located in Montreal, Canada
 - Runner fabricated in France
 - Draft tube fabricated in Portugal
 - Bearings fabricated in Germany
- Turbine Max Flow Rate — 120 ft³/sec (53,800 gpm)
- Max Head — 338 feet or 146 psi
- Turbine Diameter — 29 inches
- Turbine Weight — 46,200 pounds
- Supply Pipe Diameter — 48 inches



POWERHOUSE

New Powerhouse

- Extensive architectural effects were incorporated into the building to be compatible with the historic nature of the site
- Building construction is reinforced concrete with a brick fascia
- Building Dimensions:
164 feet long x 50 feet wide x 46 feet tall
- Distance from turbine sump floor to peak of roof is over 83 feet
- The overhead bridge crane can lift 120,000 pounds

Historic Powerhouse

- Constructed in 1904
- Building construction is unreinforced masonry
- Existing artifacts and equipment will be preserved and building modified to be a limited access museum



WATER SUPPLY AND PENSTOCK

Water Supply

- Power generation from 'run of the river' flow
 - Power is produced only when water demands from downstream users require water deliveries
- Water is diverted from the Provo River at the Olmsted Diversion into the Olmsted Flowline and eventually into a 10 million gallon storage reservoir
- Water for the power plant flows from the 10 million gallon reservoir through an 84-inch steel pipeline

Penstock

- 84-inch diameter steel pipe
- Maximum flow to the power plant is 429 ft³/sec (192,500 gpm)
- Water from the power plant is returned to the Provo River through the historic tailrace



MICRO HYDRO UNITS

Unit 3

- Supplied by Canyon Hydro of Washington State
- Max Flow Rate — 11.9 ft³/sec (5,340 gpm)
- Generator Capacity — 272 kW; 360 hp
- Maximum Head — 340 feet (147 psi)
- Turbine Speed — 1820 rpm

Unit 4

- Supplied by Canyon Hydro of Washington State
- Max Flow Rate — 7.5 ft³/sec (3,360 gpm)
- Generator Capacity — 160 kW; 215 hp
- Maximum Head — 340 feet (147 psi)
- Turbine Speed — 1830 rpm



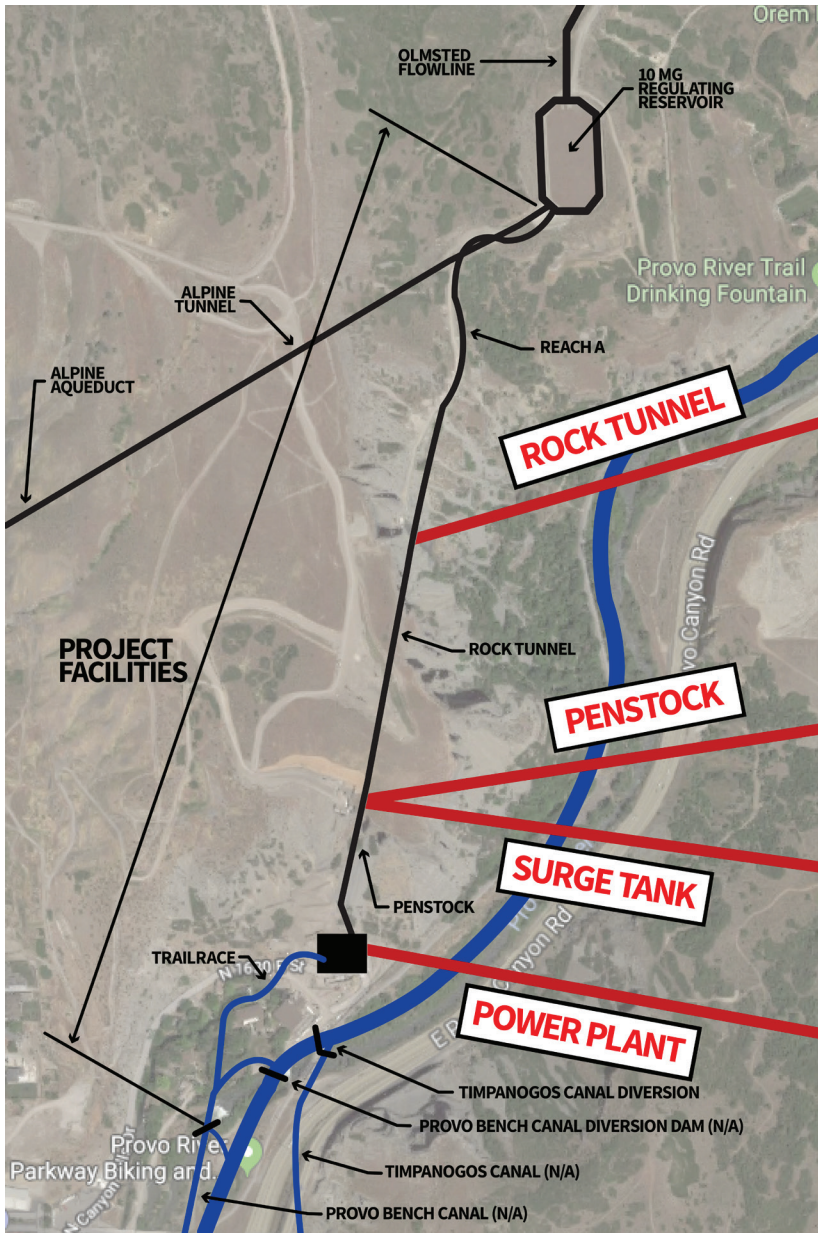
POWER TRANSMISSION

All energy generated is owned and sold by the Federal Government through the Western Area Power Administration

The energy has been allocated to:

- Central Utah Water Conservancy District
 - Utah Municipal Power Agency
 - Utah Associated Municipal Power Systems
 - Weber Basin Water Conservancy District
 - Lehi City
 - Springville City
 - Kaysville City
- The power produced is transmitted to the Provo Power System and distributed through the Rocky Mountain Power Hale Substation

Olmsted Power Plant Replacement Project Facilities - Overall Site Map



HYDRAULIC PROFILE

