

PIPELINE CONDITIONS

Pipe diameter:

Pipe material:

Operating (Gauge) pressure:

Minimum required downstream pressure:

Volumetric flow, average and maximum:

SITE CONDITIONS

Pipeline above or below ground:

Vault required:

Distance to electrical load:

Electricity usage - grid or "behind the meter":

Planned pipeline construction at site:

Performance contract in place:

GENERAL SITE DESCRIPTION

General site description, facility type, scheduled pipeline construction or maintenance:

*Please include any as-built drawings or other site documentation to validate pressure conditions and historical flow data at daily or weekly intervals.

IDEAL PIPELINE CONDITIONS: PARAMETERS

Pipe Diameter

Nominal diameters of 24" or greater.

Pipe Material

Most common piping materials such as steel, ductile iron, concrete, or piping materials that can be mated with steel pipe are suitable for LucidPipe Power Systems.

Operating (Gauge) Pressure

Varies by water system, but typically pressures above 20 PSI are required.

Minimum required operating pressure

Minimum gauge pressure required by the utility in the line after the LucidPipe to ensure no disruption to normal operation. This determines the amount of head available for extraction during power generation. A single LucidPipe Power System will extract 3-5 PSI, therefore the difference, as expressed in PSI, between the Operating Pressure and Minimum Required Operating Pressure can determine the number of turbines that can be deployed when that difference (ΔP) is divided by 3-5 PSI. (For example, a pipeline with an Operating Pressure of 100 PSI and a Minimum Required Operating Pressure of 40 PSI yields a ΔP of 60 PSI. 60 PSI represents the energy available for capture. When 60 PSI is divided by 3-5 PSI, we see that 12-20 LucidPipe Power Systems could be deployed.)

Volumetric flow

The volume of water moving through a pipeline over a fixed period of time, measured in MGD, GPM, CFS or CMS. Required volumetric flow for power production varies based on pipe diameter.

IDEAL SITE CONDITIONS

LucidPipe Power Systems are designed for gravity fed and pressurized transmission and distribution lines as well as effluent outfalls and other pipe conveyance systems. These sites may be located in municipal water or waste water systems, industrial water systems, or irrigation systems.

The most ideal sites are sites where pipeline construction or maintenance is scheduled to take place. Retrofit sites are also ideal especially when situated next to electrical loads, above ground pipes or below ground with vault access. Retrofit sites can include vault construction if needed.

LucidPipe Power Systems are an excellent tool for use in performance contracts between municipalities and ESCOs. LucidPipe Power Systems create clean, renewable power that is base-load and dispatchable.

