
GLOSSARY OF TECHNICAL TERMS

This glossary of technical terms contains terms used in this prospectus as they relate to our business. As such, these terms and their meanings may not always correspond to the standard industry meaning or usage of these terms.

“alternating current” or “AC”	the flow of electric charge, which periodically reverses or alternates direction
“bar”	a unit of pressure. 1 bar = 100,000 pascals
“current”	the flow of electric charge
“direct current” or “DC”	the flow of electric charge in one direction
“distribution line”	a distribution line delivers electricity at low/medium voltages
“distribution substation”	a distribution substation reduces the voltage to a level suitable for use by homes and businesses
“DWT”	deadweight tonnage, a measure of how much weight a vessel can carry
“electrical circuit”	an electrical device that provides a path for electrical current to flow
“electricity”	a form of energy and is the flow of electric charge. Electricity flows through an electrical circuit in either direct current or alternating current
“Electricity Supply Reliability Rating”	the percentage of time in a calendar year that our customers on average do not have unplanned outages of electricity
“electrostatic precipitator”	a particulate collection device that removes particles from a flowing gas by using the force of an induced electrostatic charge
“energy”	a measure of how much electricity is generated or consumed and is measured in joules or kWh. Energy equals to power multiplied by time
“flue gas”	the combustion-product gas resulting from the burning of fossil fuel, which exits to the atmosphere via a flue, which is a pipe or channel for conveying exhaust gases from a power generator
“flue gas desulphurisation”	a set of technologies used to remove sulphur dioxide from exhaust flue gases of fossil fuel power plants
“gigajoule” or “GJ”	a unit of energy. 1 gigajoule = 1 billion joules
“infeed substation”	a large substation exclusively provided by HEC to step down either 275 kV or 132 kV to 33 kV AC for supply to the MTR’s 33 kV power distribution network for train traction supply

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“installed capacity”	the capacity of power generators or wind turbines that have been completely assembled and erected and which have been commissioned and started commercial production of electricity
“joule” or “J”	a unit of energy. 1 joule = 1 watt for 1 second
“km”	kilometre, a unit of length. 1 km = 1,000 metres
“kV”	kilovolt, a unit of voltage. 1 kV = 1,000 V
“kVA”	kilovolt-ampere, a unit of apparent power. 1 kVA = 1,000 volt-ampere
“kW”	kilowatt, a unit of power. 1 kW = 1,000 watts
“kWh”	kilowatt-hour, a unit of energy, which is the standard unit of energy used in the electric power industry. 1 kWh = 3.6 million joules
“load”	an amount of electrical power that is consumed by an electrical apparatus or customers
“MVA”	mega volt-ampere, a unit of apparent power. 1 MVA = 1,000 kVA
“MT”	metric tonne, a unit of mass. 1 MT = 1,000 kilograms
“MTR”	mass transit railway, a rapid transit railway system in Hong Kong operated by MTR Corporation Limited
“MW”	megawatt, a unit of power. 1 MW = 1,000 kW. The installed capacity of a power plant is generally expressed in MW
“nacelle”	a cover housing that houses all of the generating components in a wind turbine, including the generator, gearbox, drive train and brake assembly, which is mounted on top of a tower and coupled to the turbine blades
“natural gas”	a naturally occurring hydrocarbon gas mixture consisting primarily of methane, but commonly includes varying amounts of higher alkanes and even a lesser percentage of carbon dioxide, nitrogen and hydrogen sulphide
“power”	the rate at which energy is generated or consumed and is the time derivative of energy. It is measured in units (e.g. watts) that represent energy per time unit
“photovoltaic”	a method of generating electricity by converting solar radiation into direct current electricity using semiconductors
“sq. km.”	square kilometre, a unit of area

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“sq. m.”	square metre, a unit of area
“substation”	a substation transforms voltage from high to low, or the reverse, with switchgear for connecting to incoming/outgoing electrical circuits
“switchgear”	switchgear is the combination of electrical disconnect switches, fuses or circuit breakers used to control, protect and isolate electrical equipment
“switching station”	a switching station is used by HEC as a switching hub to (i) connect 275 kV or 132 kV transmission circuits and/or (ii) step down electricity from 275 kV to 132 kV for onward transmission to zone substations
“TFPV”	thin film photovoltaic
“traction substation”	a distribution substation exclusively provided by HEC to step down 11 kV AC and convert it to 525 V DC to provide traction supply to electric trams on Hong Kong Island
“transformer”	an apparatus for stepping up or down voltage
“transmission line”	a transmission line delivers electricity at extra high voltages from a power plant to substations or between substations
“TWh”	terawatt-hour, a unit of energy. 1 TWh = 3.6 quadrillion joules
“V”	volt, a unit of voltage
“voltage”	the electric potential difference between two points and is equal to the work done per unit charge against a static electric field to move the charge between two points
“volt-ampere”	unit used for apparent power in an electrical circuit
“watt”	a unit of power, which is defined as one joule per second and measures the rate of energy conversion or transfer
“zone substation”	a zone substation is used by HEC to step down electricity, received from a switching station, from either 275 kV or 132 kV to either 22 kV or 11 kV for onward delivery to distribution substations; some zone substations are also interconnected with other zone substations at 132 kV