

2) Concerning Traffic and Required QoSs for application that you want

Traffic Types	Description	Bandwidth	Latency
AMI Networks			
Meter Reads	Meters report energy consumption (Ex: the 15-min interval reads are usually transferred every 4 hours)	Up to 10kbps	2 to 10sec
Demand Response (DR)	Utilities to communicate with customer devices to allow customers to reduce or shift their power use during peak demand periods	Low	500ms ~ min
Connects and Disconnects	Connects/disconnect customers to/from the grid	Low	A few 100ms, a few minutes
Substation Networks			
Synchrophasor	The major primary measurement technologies deployed for Wide-Area Situational Awareness (WASA)	A few 100kbps	20ms to 200ms
Substation SCADA	4-sec interval polling by the master to all the intelligent electronic devices inside the substation	10 to 30kbps	2 ~ 4sec
Inter-substation Communications	Emerging applications such as DER might warrant GOOSE communications outside substation	--	12ms ~ 20ms
Surveillance	Video site surveillance	A few Mbps	A few sec
Distribution Network			
Fault Location, Isolation and Restoration (FLIR)	To control protection/restoration circuits	10 to 30kbps	A few 100ms
Optimization	volt/var optimization and power quality optimization on distribution networks	2 ~ 5Mbps	25 ~ 100ms
Workforce Access	Provides expert video, voice access to field workers	250kbps	150ms
Asset Management	For predictively and pro-actively gathering and analyzing non-operational data for potential asset failures	--	--
Microgrid			
Protection	To response to faults, isolate them and ensure loads are not affected	--	100ms ~ 10sec
Operation Optimization	Monitors and controls the operations of the whole MG in order to optimize the power exchanged between the MG and the main grid	--	100ms ~ min