



GA 1.2.1_v.2021		QCI	QCD-QATAR CIVIL DEFENSE and KAHRAMAA LOSS PREVENTION SYSTEM: SUBSTATIONS - Electricity and Distribution Networks								
		Location on Site or Property	Room / Space	Fire and Loss Prevention (LP) Requirements							
Item	Type of Substation and Equipment			Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements				
1.0	PUBLIC Distribution	Substation	No.								
1.1	INDOOR Distribution Substation: VCB-OCB + TX (Oil Type + Dry Type for future use) + FP	Located in Open Area; Separated or Attached with Neighbors, subject to Site condition	MV/HV SWITCHGEAR / PANEL ROOMS	PFE-Portable Fire Extinguishers: 2-nos Clean Agent or CO ₂ , 10lbs	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized steel Door/Sand Trap Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.				

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G.	A 1.2.1_v.2021	QCD-QATAR CIVIL DEFENSE and KAHRAMAA LOSS PREVENTION SYSTEM: SUBSTATIONS - Electricity and Distribution Networks							
					Fire and Loss P	revention (LP) Require	ments		
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		
	PUBLIC Distribution	Substation		.!			,I		
1.1	INDOOR Distribution Substation:		TRANSFORMER (TX) ROOM	PFE-Portable Fire Extinguishers: 2-nos Dry Chemical, 10lbs	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized steel Door/Sand Trap Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entrin substation by sand backfill and underground excavated. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.		

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		Location on Site or Property		Fire and Loss Prevention (LP) Requirements					
Item	Type of Substation and Equipment		Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		
	PUBLIC Distribution	Substation	II.						
1.2	OUTDOOR Distribution Substation: Outdoor Switchgears (RMU [Oil or SF6) - F Swt - TX Swt.] + TX [Oil Type + Dry Type for future use) + FP	Located in Open Area; Separated or Attached with Neighbors, subject to Site condition	MV/HV SWITCHGEAR / PANEL ROOMS	PFE-Portable Fire Extinguishers: 2-nos Clean Agent or CO ₂ , 10lbs	separation (wall)	Galvanized Steel Doors/Sand Trap Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.		

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			Room / Space		Fire and Loss P	revention (LP) Require	ments	
Item	Type of Substation and Equipment	Location on Site or Property		Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	
	PUBLIC Distribution	Substation					,I	
1.2	OUTDOOR Distribution Substation:		TRANSFORMER (TX) ROOM	PFE-Portable Fire Extinguishers: 2-nos Dry Chemical, 10lbs	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized Steel Doors/Sand Trap Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entrin substation by sand backfill and underground excavated. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.	

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				Fire and Loss Prevention (LP) Requirements						
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements			
	PUBLIC Distribution	n Substation	J.							
1.3	PACKAGE Substation: RMU (Oil or SF6) + TX (Oil Type) + FSFP	No Civil Building (Steel Enclosures only)	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable			

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				Fire and Loss Prevention (LP) Requirements					
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		
	PUBLIC Distribution	n Substation	No.						
1.4	Indoor Switchgears (VCB-OCB) or Outdoor Switchgears (RMU) (Oil or SF6)	Located in Open Area; Separated or Attached with Neighbors, subject to Site condition	MV/HV SWITCHGEAR / PANEL ROOMS	PFE-Portable Fire Extinguishers: 2-nos Clean Agent or CO ₂ , 10lbs	separation (wall)	Galvanized Steel Doors/Sand Trap Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.		

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G.	A 1.2.1_v.2021	QCD-QATAR CIVIL DEFENSE and KAHRAMAA LOSS PREVENTION SYSTEM: SUBSTATIONS - Electricity and Distribution Networks							
					Fire and Loss Prevention (LP) Requirements				
Item	Type of Substation and Equipment	nd Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		
	PUBLIC Distribution	Substation		1	,				
1.5	REMOTE Stations (GMT): Ground Mounted TX (Oil Type + Dry Type for future use) + FP	Located in Open Area; Separated or Attached with Neighbors, subject to Site condition	TRANSFORMER (TX) ROOM	PFE-Portable Fire Extinguishers: 1-no. Dry Chemical, 10lbs	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized Steel Doors/Sand Trap Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.		

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				Fire and Loss Prevention (LP) Requirements						
Item	Type of Substation and Equipment		Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements			
	PUBLIC Distribution	n Substation	J.L.				.l			
1.6	REMOTE Stations (PMT): Pole Mounted Tx. (Oil Type) 200 KVa	No Civil Building (Steel Enclosures only)	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable			

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					Fire and Loss P	revention (LP) Require	ments		
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		
2.0	CONSUMER Distribu	ition Substation							
2.1	INDOOR Distribution Substation: VCB-OCB + TX (Oil Type + Dry Type) + FP + MV Panel	Located outside		Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers, 1-no. Clean Agent or CO ₂ , 10lbs No requirement of fire suppression system if located 15 m away from any building or structures.	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized Steel Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.		

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					Fire and Loss P	revention (LP) Require	ements		
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		
	CONSUMER Distribu	tion Substation	10				'		
2.1	INDOOR Distribution Substation:		A/G (Aboveground) TRANSFORMER (TX) ROOM	Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers, 2-nos Dry Chemical, 10lbs No requirement of fire suppression system (Dry Chemical Extinguishing system) if located 15 m away from any building or structures.	2-hrs (120mins) FRR fire rated & blast proof enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entrient in substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation when substation located within the building. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.		

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G	A 1.2.1_v.2021	QCD-QATAR CIVIL DEFENSE and KAHRAMAA LOSS PREVENTION SYSTEM: SUBSTATIONS - Electricity and Distribution Networks								
			r Room / Space	Fire and Loss Prevention (LP) Requirements						
Item	Type of Substation and Equipment	Location on Site or Property		Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements			
	CONSUMER Distribu	tion Substation								
2.1	INDOOR Distribution Substation:			Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers, 1-no. Clean Agent or C0 ₂ , 10lbs	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces.	Galvanized Steel Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation.			

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			Room / Space		Fire and Loss P	revention (LP) Require	ments		
Item	Type of Substation and Equipment	Location on Site or Property		Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		
	CONSUMER Distribu	tion Substation	Ti.	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>					
2.1	INDOOR Distribution Substation:		U/G (Underground) TRANSFORMER (TX) ROOM	Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers, 1-no. Clean Agent or C0 ₂ , 10lbs	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces.	Galvanized Steel Doors/Sand Trap Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. (4)Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation.		

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	A 1.2.1_v.2021		SUBSTATI	IONS - Electricity and Distribution Networks Fire and Loss Prevention (LP) Requirements				
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	
	CONSUMER Distribu	ition Substation		,			'	
2.2	OUTDOOR Distribution Substation: Outdoor Switchgears (RMU [Oil or SF6) - F Swt - TX Swt.] + TX [Oil Type + Dry Type) + FP + MV Panel	Located outside (detached) or within or attached to consumer building, at Ground Level (GF),		system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers,	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized Steel Doors & Galvanized steel Sand Trap ventilated louvers.	Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-prooprovided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entin substation by sand backfill and underground excavated. (4)Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation when its located within the building. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated enclosure and separation wall.	

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G.	A 1.2.1_v.2021	QC		DEFENSE and KAHRAMAA LOSS PREVENTION SYSTEM: IONS - Electricity and Distribution Networks				
					Fire and Loss P	revention (LP) Require	ements	
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	
	CONSUMER Distribu	tion Substation		11	1			
2.2	OUTDOOR Distribution Substation:		A/G (Aboveground) TRANSFORMER (TX) ROOM	Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers, 2-nos Dry Chemical, 10lbs	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized Steel Doors/Sand Trap Doors & Galvanized steel Sand Trap ventilation louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation when its located within the building Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is no requirement of fire rated	





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				enclosure and separation wall.
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				Fire and Loss Prevention (LP) Requirements				
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	
	CONSUMER Distribu	tion Substation	Jy.					
2.2	OUTDOOR Distribution Substation:		MV/HV SWITCHGEAR / PANEL ROOMS	Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers, 1-no. Clean Agent or CO ₂ , 10lbs	2-hrs (120mins) FRR fire rated enclosures and separation (wall) from adjacent rooms or spaces.	Galvanized Steel Doors & Galvanized steel Sand Trap ventilation louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation.	

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		Location on Site or Property	Room / Space		Fire and Loss Prevention (LP) Requirements				
Item	Type of Substation and Equipment			Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		
	CONSUMER Distribu	tion Substation	·	···			'		
2.2	OUTDOOR Distribution Substation:		A/G (Above ground) /Ground level TRANSFORMER (TX) ROOM	Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers, 2-nos Dry Chemical, 10lbs No requirement of fire suppression system if located 15 m away from any building or structures.	2-hrs (120mins) FRR fire rated & blast proof enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized Steel Doors/Sand Trap Doors & Galvanized steel Sand Trap ventilation louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation when its located within the building. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is		

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			no requirement of fire rated
			enclosure and separation wall.
			enclosure and separation want

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			SUBSTAT	Fire and Loss Prevention (LP) Requirements				
ltem	Type of Substation and Equipment		Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	
	CONSUMER Distribu	ution Substation	II.				ļ.	
2.3	PACKAGE Substation: RMU (Oil or SF6) + TX (Oil Type) + FSFP	Steel Enclosures only. Located outside, sometimes within consumer building (GF) in very limited cases where suitable height available 5-6 m.	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	

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		The state of the s			Fire and Loss P	revention (LP) Require	ements	
Item	Type of Substation and Equipment		Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	
	CONSUMER Distribu	ition Substation						
2.4	SWITCHING Stations: Indoor Switchgears (VCB-OCB) or Outdoor Switchgears (RMU) (Oil or SF6)	Located outside (detached) or within or attached to consumer building, at Ground Level (GF), subject to the Project type		Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers: 2-nos Clean Agent or CO ₂ , 10lbs No requirement of fire suppression system if located 15 m away from any building or structures.	or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized Steel Doors & Galvanized steel Sand Trap ventilated louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & waterproof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entryin substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smok within the substation when its located within the building. Above Point 2 & 3 shall not be applicable in case the substatic is located 15 m away from any building or structure as there in requirement of fire rated enclosure and separation wall.	

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				Fire and Loss Prevention (LP) Requirements				
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	
	CONSUMER Distribu	ition Substation	I.					
2.5	REMOTE Stations (GMT): Ground Mounted TX (Oil Type + Dry Type) + FP + MV Panel TX capacity: 500-800- 1000-1250-1600 Kva	Located outside (detached) or within or attached consumer building, at Ground Level (GF) or Basement or High Floor, subject to the project type.	A/G (Aboveground) TRANSFORMER (TX) ROOM	Fire Alarm System + Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE, 2-nos Dry Chemical, 10lbs No requirement of fire suppression system if located 15 m away from any building or structures.	2-hrs (120mins) FRR fire rated & blast proof enclosures and separation (wall) from adjacent rooms or spaces. No requirement, if located 15 m away from any building or structures.	Galvanized Steel Doors/Sand Trap Doors & Galvanized steel Sand Trap ventilation louvers.	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & water-proof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entry in substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation when its located within the building. Above Point 2 & 3 shall not be applicable in case the substation is located 15 m away from any building or structure as there is	

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			no requirement of fire rated enclosure and separation wall.





G.	A 1.2.1_v.2021	QCD-QATAR CIVIL DEFENSE and KAHRAMAA LOSS PREVENTION SYSTEM SUBSTATIONS - Electricity and Distribution Networks						
					Fire and Loss Prevention (LP) Requirements			
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	
	CONSUMER Distribu	tion Substation	1/.	W.	'		.l	
2.5	REMOTE Stations (GMT): Ground Mounted TX (Oil Type + Dry Type) + FP + MV Panel TX capacity: 500-800- 1000-1250-1600 Kva		U/G (Underground) TRANSFORMER (TX) ROOM	Dry Chemical extinguishing system as per NFPA101 Chapter 9.8.1 Table 9.8.1 and NFPA17 Chapter 5.1 PFE-Portable Fire Extinguishers, 1-no. Clean Agent or CO ₂ , 10lbs	or spaces	Doors/Sand	(1) Exit/Safety Signs (Arabic & English format); (2) Penetrations of FRR fire rated enclosure & separation walls shall be sealed with fire resistant materials. (3) Mechanical sleeves (firerated, gas sealed & waterproof) provided at all cables entries and exits of wall. Not applicable (N/A) in areas where cable entrin substation by sand backfill and underground excavated. (4) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation	

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GA 1.2.1_v.2021 QCD-QATAR CIVIL DEFENSE and KAHRAMAA LOSS PREVENTION SYSTEM SUBSTATIONS - Electricity and Distribution Networks							
					Fire and Loss P	revention (LP) Require	ments
Item	Type of Substation and Equipment	Location on Site or Property	Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements
	CONSUMER Distribu	ition Substation	· · ·				
2.6	REMOTE Stations (PMT): Pole Mounted Tx. (Oil Type) 200 Kva	No Civil Building (On Pole only)	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable	N/A - Not applicable

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GA 1.2.1_v.2021		QCD-QATAR CIVIL DEFENSE and KAHRAMAA LOSS PREVENTION SYSTEM: SUBSTATIONS - Electricity and Distribution Networks						
	Type of Substation and Equipment	Location on Site or Property Room / Space		Fire and Loss Prevention (LP) Requirements				
Item			Room / Space	Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements	

NOTES.

- 1) Transformers capacity can be (500-800-1000-1250-1600) KVA.
- 2) Fire safety signs shall be provided in both Arabic and English text.
- 3) For Public Distribution substations 2-hrs (120mins) FRR fire rated enclosures and separation (wall) shall be provided wherever its attached to any building.
- 4) Standalone substations or those not part, within or attached to the building or structure and is 15.0 m away from any building or structure in the same or adjacent property, shall as a minimum, be provided the appropriate type and quantity of portable fire extinguishers in accordance with NFPA 10 for its fire suppression
- 5) Firefighting, fire detection and fire alarm provisions of the substation shall be in accordance with QCDD requirements.
- 6) All penetrations on fire rated walls shall be sealed by fire resistant materials.
- 7) Building smoke extraction system shall be interfaced with the substation for smoke extraction in case of fire/smoke within the substation where substation is located within the building.
- 8) The Consultant/contractor shall comply with all the Fire and Loss Prevention requirements stated here in this document when applying for Substation approvals at QCD. The review and evaluation of Fire and Life Safety Plans and the conduct of QCD inspection for the issuance of Fire Safety Certificate for Substations, shall be based on the Fire and Loss Prevention requirements stated in this document.

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Item	Type of Substation and Equipment	Location on Site or Property Room / Space		Fire and Loss Prevention (LP) Requirements				
			Fire Extinguishing /Fire Alarm System	Wall Enclosures (hrs/mins)	Opening Protectives (hrs/mins)	Other Loss Prevention Requirements		

LEGENDS	•		
A/G	Above Ground	FSFP	Free Standing Feeder Pillar
U/G	Under Ground	BOFP	Bolt On Feeder Pillar
B/W	Between	MV	Medium Voltage
N/A	Not Applicable	HV	High Voltage
VCB	Vacuum Circuit Breaker	FRR	Fire Resistance rating
OCB	Oil Circuit Breaker	FPR	Fire Protection Rating
RMU	Ring Main Unit	GF	Ground Floor
F SWT	Feeder Switch	PFE	Portable Fire Extinguishers
TX SWT	Transformer Switch	CO ₂	Carbon Dioxide
TX	Transformer	AFSS	Automatic Fire Suppression System
FP	Feeder Pillar	3	

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