Base Load Power Hub (BLPH)

System Architecture

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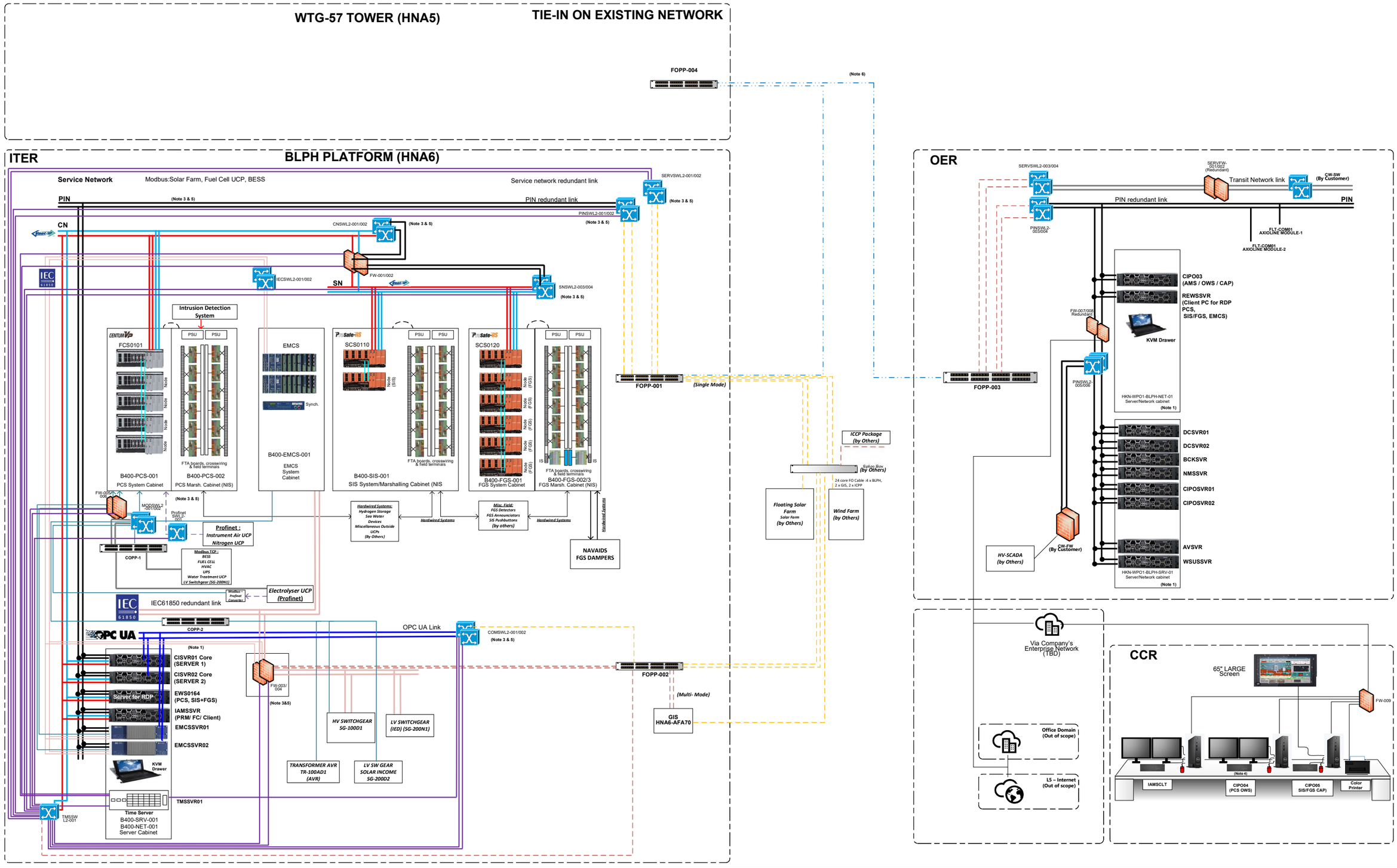
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05	16/05/2025	Accepted for Construction (AFC)	SKR	MP/AB	SC
04	14/02/2025	Issue for Review (IFR)	SKR	MP/AB	SC
03	26/08/2024	Issue for Review (IFR)	SKR	MP/AB	SC
02	28/06/2024	Issue for Review (IFR)	SKR	MP/AB	SC
01	24/05/2024	Issue for Review (IFR)	SKR	MP/AB	SC
00	23/04/2024	Issue for Review (IFR)	SKR	AB	SC

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CROSSWIND BLPH PROJECT - SYSTEM ARCHITECTURE



AMS	: Alarm Management System	FCS	: Field Control Station
AV	: Anti-virus	FGS	: Fire & Gas System
BCK	: Backup Server	FO	: Fiber Optic
BESS	: Battery Energy Storage System	FOPP	: Fiber Optic Patch Panel (by others)
BLPH	: Base Load Power Hub	FTA	: Field Termination Assembly
CAP	: Critical Alarm Panel	HIST	: Historian
CCR	: Central Control Room	HKN	: Hollandse Kust Noord
CI	: Collaborative Information	IAMS	: Instrument Asset Management System
CN	: Control Network	ITER	: Instrument & Telecom Equipment Room
DC	: Domain Controller	LHVS	: Land High Voltage Station
DMZ	: De-militarized Zone	MCC	: Motor Control Center
ESB	: IO communication bus	MODB	: Modbus
EWS	: Engineering Work Station	MQTT	: Message Queuing Telemetry Transport
FC	: Field Communication (Vnet/IP)	NMS	: Network Management System

OER	: Onshore Equipment Room		
OHVS	: Offshore High Voltage Station		
OWS	: Operator Work Station		
PIN	: Plant Information Network		
PKG	: Package		
RDP	: Remote Desktop Protocol		
SCS	: Safety Control Station		
SIS	: Safety Instrumented System		
SN	: Safety Network		
SW	: Switch		
UCP	: Unit Control Panel (3rd party systems)		
VM	: Virtual Machine		
Vnet/IP	: Yokogawa's Control network		
WSUS	: Windows Security Update Services		

LEGEND:

- PIN (Plant Information Network)
- Vnet/IP BUS 1 PCS
- Vnet/IP BUS 2 PCS
- Vnet/IP BUS 1 SIS/FGS
- Vnet/IP BUS 2 SIS/FGS
- ESB bus connection
- IEC61850 connection
- OPC UA connection
- Service Network connection
- Modbus TCP connection
- Profinet (non redundant)
- Fiber Optic Single Mode
- Fiber Optic Multi Mode
- Fiber Optic backbone (by Crosswind)
- System Cable connection
- NTP Connection

Note 1 : Exact assignment of Servers per cabinet to be defined in cabinet General Arrangement Drawing.
Note 2 : For IP Addresses refer to 1724000594-IN-RE-00043 Cyber Security Settings
Note 3 : All Network Components will be installed in Network Cabinet.
Note 4 : Supply of Console Desk in CCR is in Customer Scope.
Note 5 : All Network Switches and Firewall is configured in VLAN.
Note 6 : Intermediate FO Connection between HNA5 and OER Intentionally not shown.

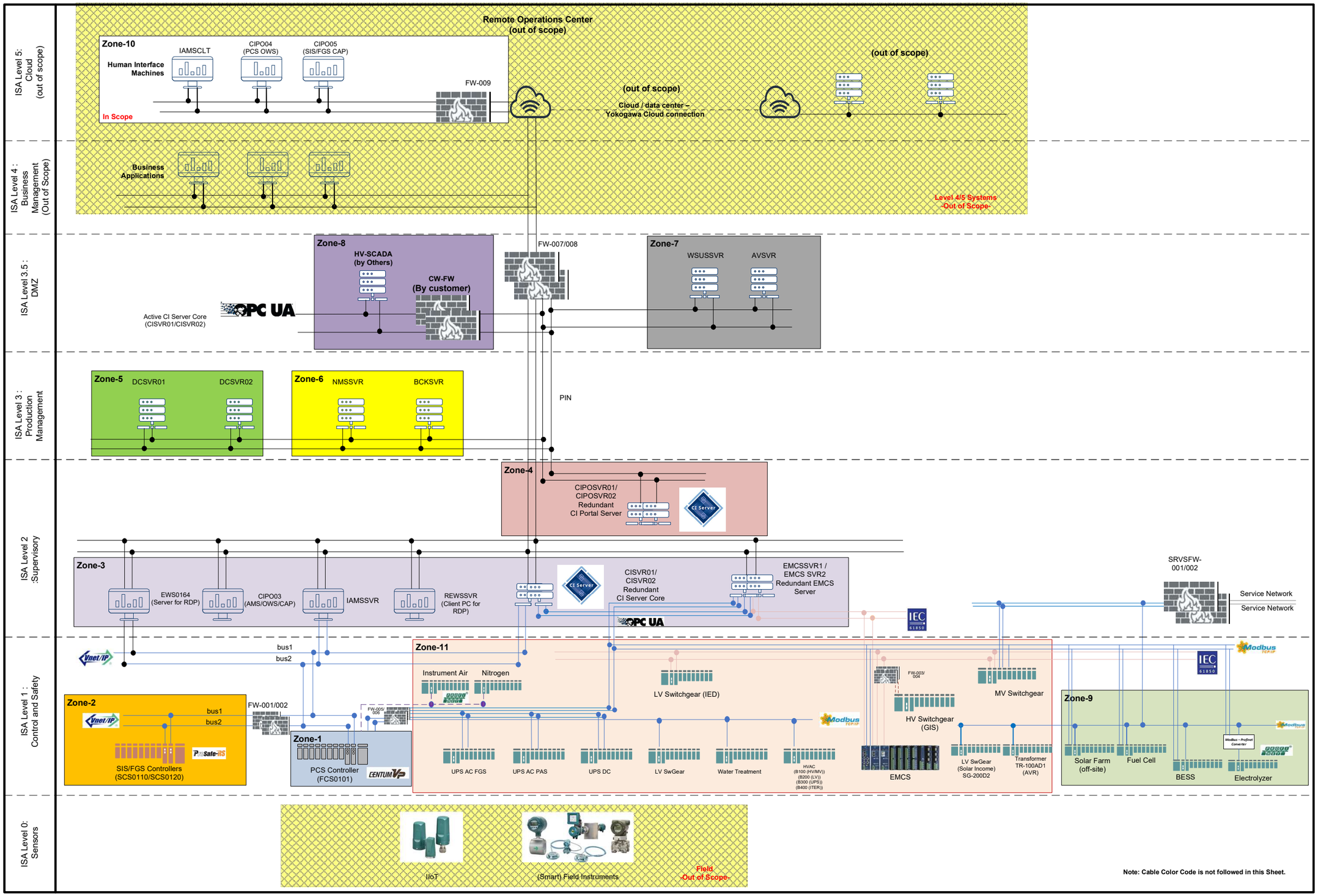
Zone-1 : PCS Control Zone	Zone-2 : Safety Control Zone
Zone-3 : PCS Zone	Zone-4 : Application Server Facility Zone
Zone-5 : Security Management Zone-1	Zone-6 : Security Management Zone-2
Zone-7 : Demilitirized Zone	Zone-8 : Croswind Zone
Zone-9 : Service Network Zone	Zone-10: Application Server Facility Zone-OD
Zone-11: Third Party System Zone	: Out of Scope

REV	DWG BY	CHK BY	APP BY	DATE
06	MDO	MGA	MDO	28-Jul-25
05	SKR	AB	SC	16-May-25
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CROSSWIND BLPH PROJECT - CYBER ARCHITECTURE



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DMZ	: De-militarized Zone	MCC	: Motor Control Center	UCP	: Unit Control Panel (3rd party systems)
ESB	: IO communication bus	MODB	: Modbus	VM	: Virtual Machine
EWS	: Engineering Work Station	MQTT	: Message Queuing Telemetry Transport	Vnet/IP	: Yokogawa's Control network
FC	: Field Communication (Vnet/IP)	NMS	: Network Management System	WSUS	: Windows Security Update Services

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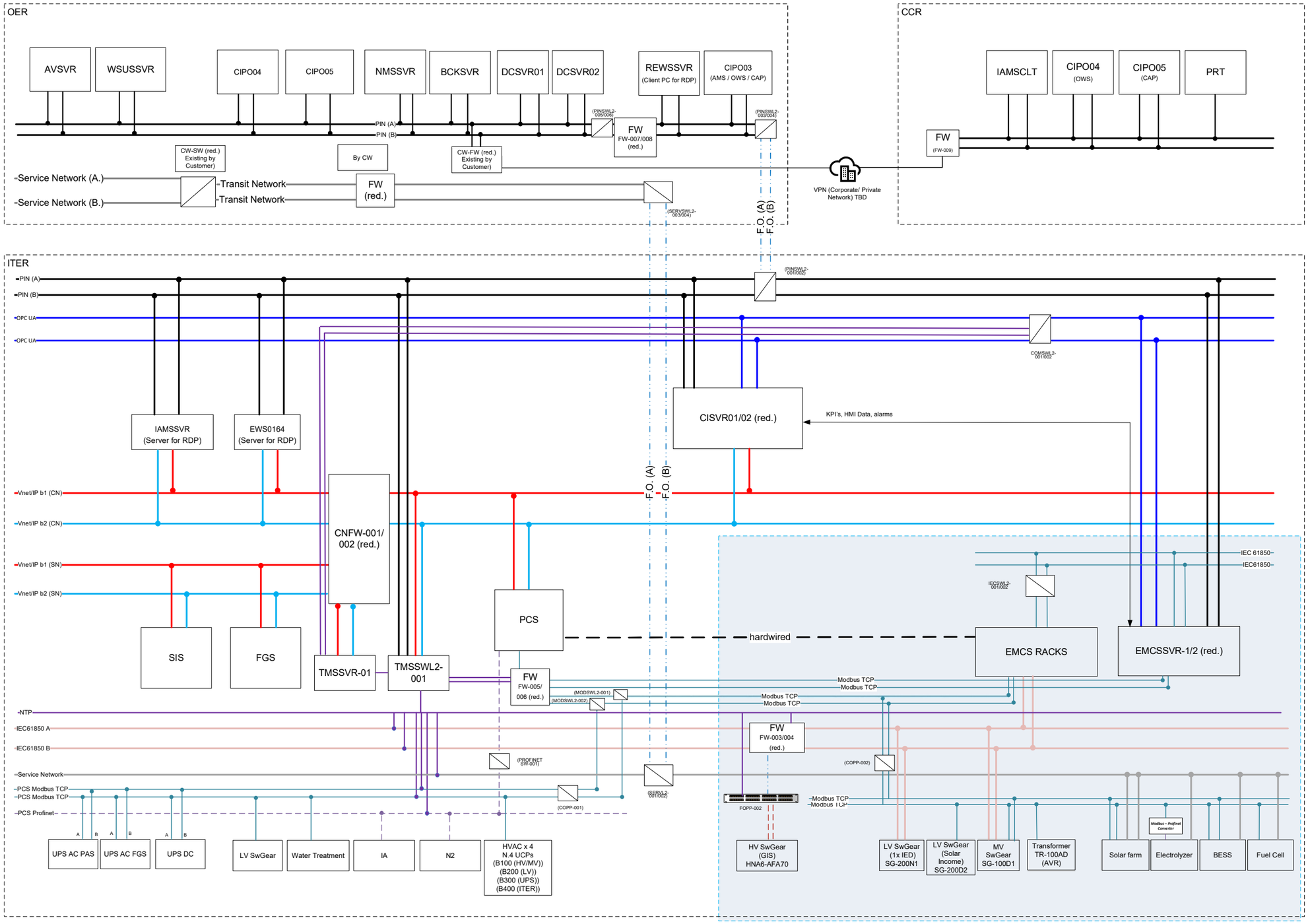
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CROSSWIND BLPH PROJECT - SYSTEM BLOCK DIAGRAM



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