WG13 Issues - CIM Issues #6993

Modeling of multiple inverters mapping to PCC

09/20/2024 10:12 AM - Alex Anderson

Status:	New		
Priority:	Normal		
Target version:			
Author/Contact Info:		**Standard(s):**	
Base Release:		**Version:**	
Solution to be Applied To:		**Clause:**	
Solution Version:		**Sub-Clause:**	
Solution Applied By:		**Paragraph:**	
Completion Date:		**Table:**	
CIM Keywords:	61970-Production, 61970-Wires	**Originally Closed in Version:**	
Breaking Change:		**Origination Date:**	
Breaking Change Description:		**Origination ID:**	
CIM Impacted Groups:	WG13	**Originally Assigned To:**	
Requestor:			

Description

Current PowerElectronicsConnection assumes a single point point of common coupling (PCC) between inverter and grid model.

Issue 1: PV farms are often modeling on grid side by a single equivalent injection, but are composed of multiple strings of inverters that are connected together on AC side. Controls and AssetInfo descriptions need to be applied at individual inverter model for studying volt-var, etc injections into the grid. Need a method to provide equivalencing of output for SSH profile that also provides granular level of detail need for controls modeling.

Issue 2: Most distribution power flow solvers are unable to handle one inverter with multiple DC sources. If the physical equipment contains one inverter with PV + battery + wind on shared DC bus, OpenDSS and other tools will create three inverters with three terminals injecting into the same node. Unclear if this needs to be expressed in CIM, or if this is strictly a model conversion issue.

Related issues:

Related to WG13 Issues - CIM Issues #6357: [GMDM #9] Modeling behind the inve...		**Closed**

History

#1 - 09/20/2024 10:12 AM - Todd Viegut

- Related to CIM Issues #6357: [GMDM #9] Modeling behind the inverter added

#2 - 09/20/2024 10:24 AM - Alex Anderson

- File Inverter resources McDermott PES-GM.pptx added

- Subject changed from Modeling of multiple inverters / pcc modeling to Modeling of multiple inverters mapping to PCC

- Description updated

- CIM Keywords 61970-Production, 61970-Wires added

- CIM Impacted Groups WG13 added

- CIM Impacted Groups deleted (None)

Files

Inverter resources McDermott PES-GM.pptx	4.4 MB	09/20/2024	Alex Anderson