# Summary of BGE Network Data

1758 feeders (networks): networkId

1684 network dependencies: networkId1, networkId2 mapping (not sure meaning)

180 sources: nodeId, networkId; several sources with the same networkId

5680 equivalent source: nodeId, KVLL; no networkId, multiple same nodeId

1002989 nodes: nodeId, X, Y

5003282 Intermediate point: sectionId, networkId, X, Y

14710 node inter: nodeId, networkId

1898 head node: networkId, nodeId, structureId

207808 load: deviceNumb, deviceType, networkId

785806 customer load: deviceNumb, deviceType, loadValue

5673 equivalent load: nodeId, loadModelId, loadValue (all 0s)

216882 device UDD: deviceNumb, deviceType, networkId

3434 meter: networkId, val1total

5397 capacitor extltd

5397 shunt capacitor: networkId, equipmentId, ratedKVAR, ratedV

1027156 section: sectionId, networkId, fromNodeId, toNodeId

1344761 section device: deviceNumb, deviceType, networkId, sectionId

226510 section udd

20620 structure connection: structureId, nodeId, X, Y

6988 structure: structureId, middleX, middleY

250854 overhead line: networkId, lineId, length

257105 underground line: networkId, cableId, length

207480 transformer: networkId, equipmentId, normalFeedingNodeId?

707 load tap changer: networkId…

707 load tap changer extltd

80 auto tap changing extst

258660 switch: networkId, equipmentid, closedPhase

148264 fuse: networkId, equipmentId, closedPhase

3022 breaker: networkId, equipmentId, closedPhase

4184 recloser: networkId, equipmentId, closedPhase

80 regulator: networkId, equipmentId…

1685 sectionalizer: networkId, equipmentId…

222 series reactor: networkId, equipmentId…

Questions

CYMSOURCE:

1. What’s equipment id, device number?
2. No desired voltage information.
3. 180 sources
4. Several sources with the same networkid
5. How to differentiate different feeders in one network?

CYMEQUIVALENTSOURCE

1. Multiple with same Nodeid
2. Networkid can be found using Nodeid

CYMNODE

1. Nodeid with no networkid

CYMOVERHEADLINE

1. Where to find lineid meaning?
2. Some networkid with very few overhead lines (4)

CYMUNDERGROUNDLINE

1. Where to find cableid meaning?
2. Some networkid with very few underground lines (2)

CYMSWITCH

1. Device number, equipment id, closedphase meaning?

CYMSECTIONALIZER

CYMFUSE

CYMRECLOSER

CYMREGULATOR

1. No bandwidth information

CYMSHUNTCAPACITOR

CTMCUSTOMERLOAD

1. Connected to which node?

CYMSECTION

1. Section meaning? (from-to)

CYMSECTIONDEVICE

1. Different sectionid with same device number
2. Device number, device type, sectionid, location?

# Summary of BGE Equipment Data

26 breaker EQ

501 cable EQ

501 cable concentric neutral EQ

501 cable conductor EQ

501 cable insulation EQ

3 conductor EQ

4 PV model EQ

173 fuse EQ

110 load tap changer EQ

133 overhead line EQ

38 recloser EQ

10 regulator EQ

845 reliability extension EQ

9 sectionalizer EQ

60 series reactor EQ

629 shunt capacitor EQ

214 source EQ

115 switch EQ

1831 transformer EQ

# Convert Cyme Data to Gridlabd File

<https://github.com/gridlab-d/tools/blob/9372541f731017f71ca3b96ef8de4775724d6664/conversion_scripts/cymeToGridlab.py#L121>

Find networkid == feederid

1. Source

File: CYMSOURCE (180) or CYMEQUIVALENTSOURCE (5680)

Nodeid, networkid, equipmentid, desiredvoltage (not found)

1. Node

File: CYMNODE (1002989)

Nodeid, X (latitude), Y (longitude)

1. Overheadline (250854)

File: CYMOVERHEADLINE

Device number, networkid, lineid, length

1. UndergroundLine (257105)

File: CYMUNDERGROUNDLINE

DeviceNumber, cableid, length

1. Switch

File: CYMSWITCH (258660)

DeviceNumber, equipmentid, closedPhase

1. Sectionalizer

File: CYMSECTIONALIZER (1685)

deviceNumber, normalStatus, networkid, equipmentid, closedphase

1. Fuse

File: CYMFUSE (148264)

deviceNumber, equipmentid, networkid, normalStatus

1. Recloser

File: CYMRECLOSER (4184)

deviceNumber, equipementid, networkid, normalStatus, closedphase

1. Regulator

File: CYMREGULATOR (80)

deviceNumber, equipmentid, bandwidth (not found), boostpercent, tappositionA/B/C

1. Shunt capacitor

File: CYMSHUNTCAPACITOR (5397)

deviceNumber, equipmentid, status, phase (not found), KVARA/B/C, KVLN, CapacitorControlType, onvalue, offvalue, KVArabc (not found)

1. Customer load

File: CYMCUSTOMERLOAD (785806)

Devicenumber, devicetype, cusonmerClassId, phase, loadValueType, phase, loadValue1/2, connectedKVA

1. Section

File: CYMSECTION (1027156)

Sectionid, formNodeId, ToNodeId, Phase

1. Section device

File: CYMSECTIONDEVICE (1344761)

deviceNumber, deviceType, sectionId, location (not sure what 0,1,2 stands for)

1. Transformers

Equipmentid, networkid, device number

1. EQConductor

EquipmentId, FirstRating, GMR, R50

1. EQOverheadline

EquipmentId, SelfResistanceA, SelfResistanceB, SelfResistanceC, SelfReactanceA, SelfReactanceB, SelfReactanceC, MutualResistanceAB, MutualResistanceBC, MutualResistanceCA, MutualReactanceAB, MutualReactanceBC, MutualReactanceCA

1. EQundergroundcable
2. EQregulator
3. EQtransformer
4. EQgeometricalArrangement