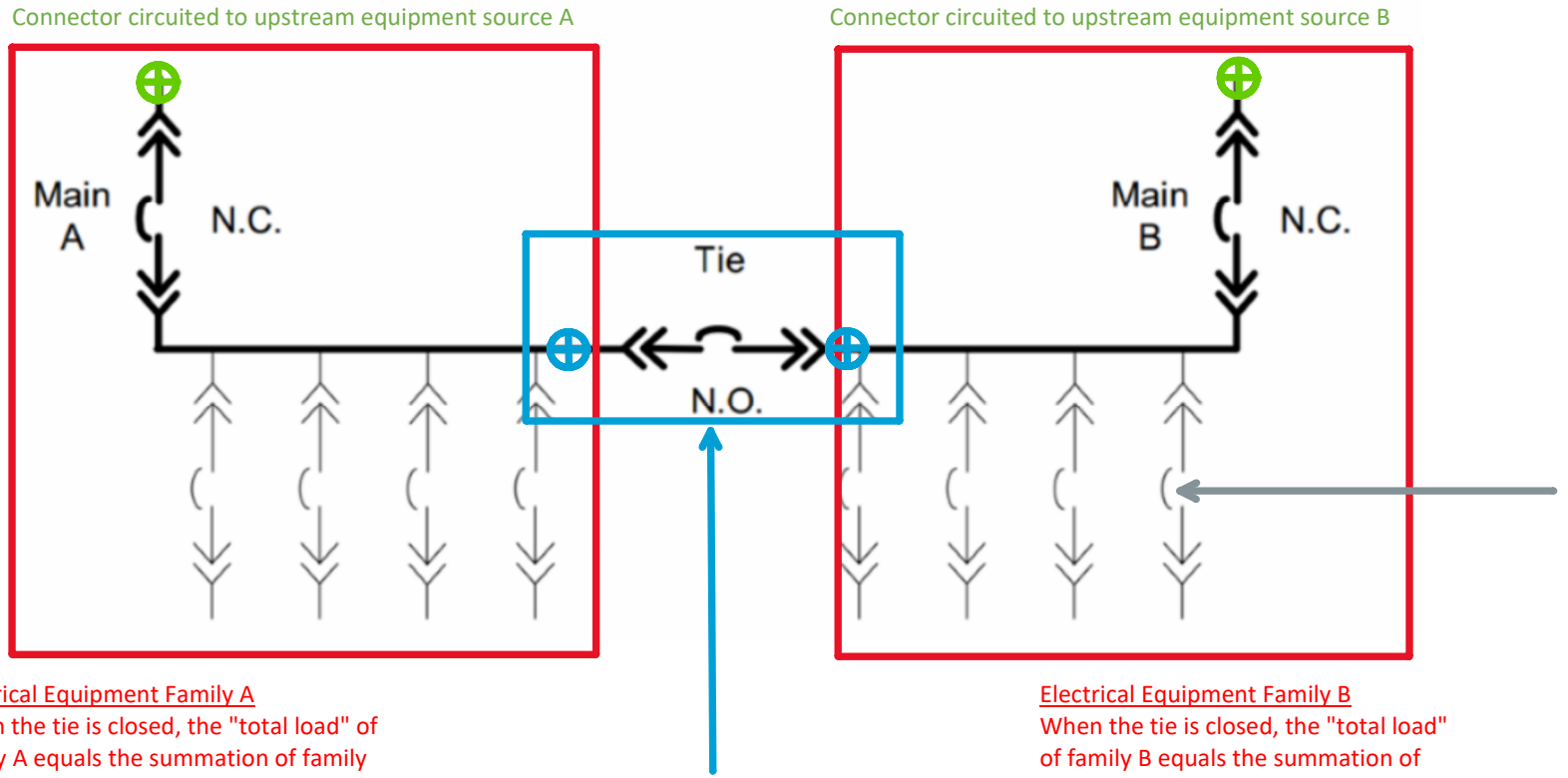
Electrical Circuiting Main-Tie-Main Support

Friday, February 9, 2024 4:01 PM



"Local connected loads" are downstream loads circuited to the electrical equipment family. This definition or similar definition of load could solve the circular reference error.

Electrical Equipment Family A

When the tie is closed, the "total load" of family A equals the summation of family A's local connected load and family B's local connected load which is connected via the tie circuit/connector. When the Tie is open, the "total load" of family A is equivalent to the family A's local connected load. Only the total load would need to be passed through the primary connector to the upstream connector for ease of calculation.

Electrical circuit connecting (2) connectors to share the downstream connected load of both pieces of equipment. Ideally the tie could be opened or closed by a state/status toggle to allow for analysis of loads in both cases. The definition of the "Tie" to differentiate this circuit as a bidirectional load sharing could be set in the circuit or as part of the connector definition.

Multiple Tie connectors within a family would be a long term goal to support loop power topologies, this would not necessarily need to be allowed in the first implementation.

Electrical Equipment Family B

When the tie is closed, the "total load" of family B equals the summation of family B's local connected load and family A's local connected load which is connected via the tie circuit/connector. When the Tie is open, the "total load" of family B is equivalent to the family B's local connected load. Only the total load would need to be passed through the primary connector to the upstream connector for ease of calculation.