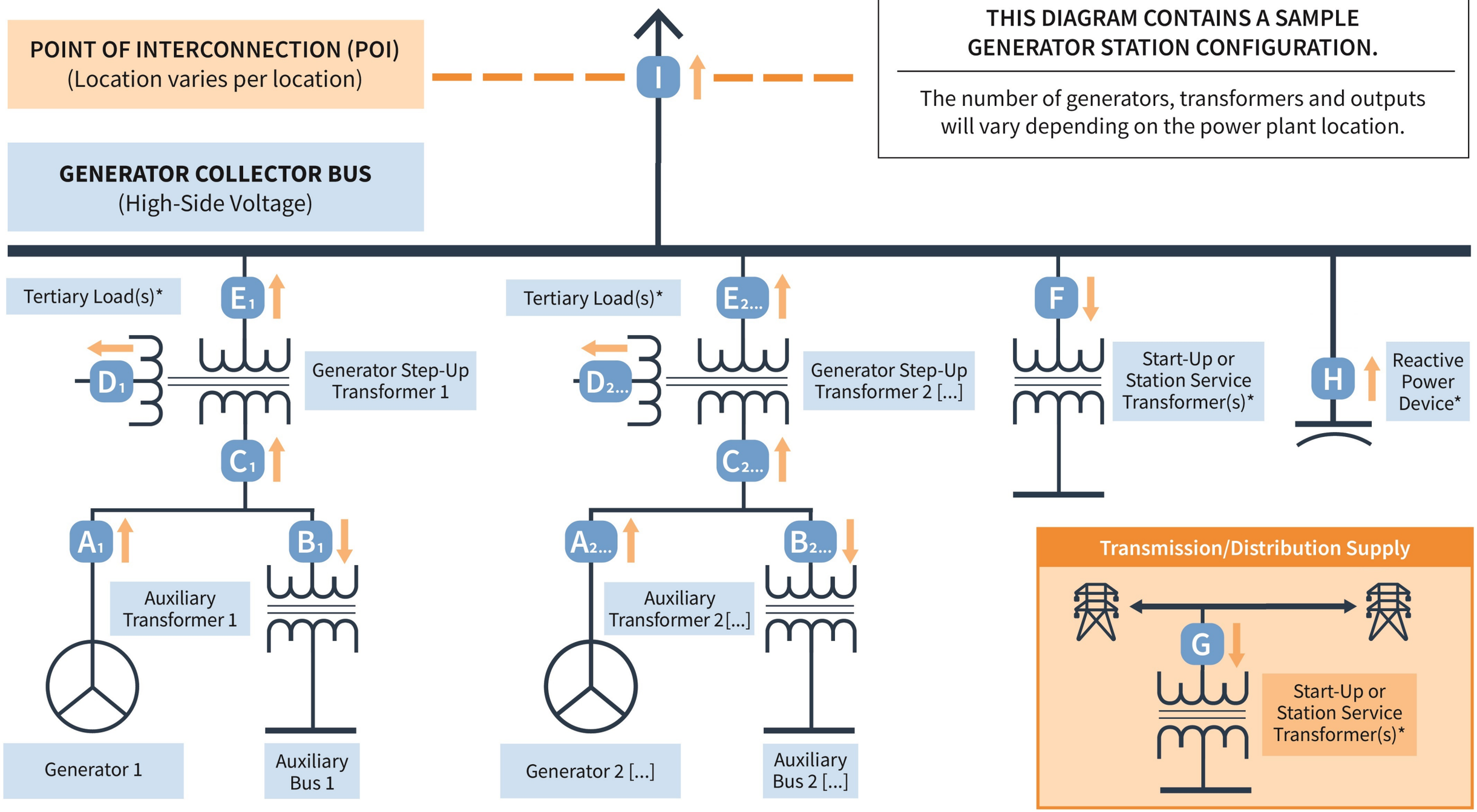
SYNCHRONOUS GENERATORS

POINT OF INTERCONNECTION (POI)
(Location varies per location)

GENERATOR COLLECTOR BUS
(High-Side Voltage)

THIS DIAGRAM CONTAINS A SAMPLE GENERATOR STATION CONFIGURATION.

The number of generators, transformers and outputs will vary depending on the power plant location.



LEGEND OF TERMS

A – Low-Side Gross Output
B – Auxiliary Transformer Load
C – Low-Side Net Output
D – Tertiary Winding Load
E – High-Side Net Output
F – High-Side Connected Transformer Load
G – Remotely Connected Transformer Load
H – Reactive Power Device
I – Net Power Output

[x...] – The number of generators at plant location
***** – If applicable
→ – Typical power-flow direction at the identified points

WIND FARM GENERATORS

POINT OF INTERCONNECTION (POI)
(Location varies per location)

THIS DIAGRAM CONTAINS A SAMPLE GENERATOR STATION CONFIGURATION.

The number of generators, transformers and outputs will vary depending on the power plant location.

Q

Tertiary Load(s)*

P

Generator Step-Up Transformer

Main Transformer Form

GENERATOR COLLECTOR BUS
(Intermediate Voltage Level)

O

K_1

Wind Farm or Padmount Transformer

Wind Farm Form

J_1

Aggregate Generator 1

$K_{2...}$

Wind Farm or Padmount Transformer

Wind Farm Form

$J_{2...}$

Aggregate Generator 2 [...]

L

Station Service Transformer(s)*

Load Transformer Form

N

Reactive Power Device(s)*

Transmission/Distribution Supply

M

Station Service Transformer(s)*

Legend of Terms

J – Low-Side Gross Output
K – High-Side Padmount Aggregate Output
L – Collector Bus Connected Transformer Load
M – Remotely Connected Transformer Load
N – Reactive Power Device
O – Low Side GSU Output
P – Tertiary Transformer Load
Q – Net Power Output

***** – If applicable
[x...] – The number of generators at plant location
– Applicable parameters need to be submitted as part of form
– Typical power-flow direction at the identified points

INVERTER-BASED GENERATORS

POINT OF INTERCONNECTION (POI)
(Location varies per location)

THIS DIAGRAM CONTAINS A SAMPLE GENERATOR STATION CONFIGURATION.

The number of generators, transformers and outputs will vary depending on the power plant location.

Q

Tertiary Load(s)*

P

Generator Step-Up Transformer

Main Transformer Form

GENERATOR COLLECTOR BUS
(Intermediate Voltage Level)

O

K_1

Inverter-Based or Padmount Transformer

Inverter-Based Form

J_1

Aggregate Generator 1

$K_{2...}$

Inverter-Based or Padmount Transformer

Inverter-Based Form

$J_{2...}$

Aggregate Generator 2 [...]

L

Station Service Transformer(s)*

Load Transformer Form

N

Reactive Power Device(s)*

Transmission/Distribution Supply

M

Station Service Transformer(s)*

Legend of Terms

J – Low-Side Gross Output
K – High-Side Padmount Aggregate Output
L – Collector Bus Connected Transformer Load
M – Remotely Connected Transformer Load
N – Reactive Power Device
O – Low Side GSU Output
P – Tertiary Transformer Load
Q – Net Power Output

***** – If applicable
[x...] – The number of generators at plant location
– Applicable parameters need to be submitted as part of form
– Typical power-flow direction at the identified points

SEASONAL ASSUMPTIONS FOR GEN MODEL

TYPES	SUMMER	WINTER	NOTES
Time Period	June 1 to Sept.1	Dec. 1 to March 1	
Time of Day	16:00	07:00 or 19:00	Select the time of day when the generator output would be highest.
Cooling Water Temp. (Degrees Fahrenheit)	80°	35°	If applicable. This should be interpreted as intake water temp. assuming max. output and efficiency at cooling towers (Point C), and/or expected water temps. from the cooling body on high-demand days.
Ambient Relative Humidity (%)	45	40	If applicable.
Ambient Air Temp. (Degrees Fahrenheit)	92°	20°	If applicable.