

# GIC demo

GIC Demo EUR | SGIC

Change ground resistance for all substations.

Change resistance for all transmission lines.

Select which lines should be connected. Disconnected lines are shown in light grey color.

Drag the slider to rotate the electric field.

Earthing Resistance: 0.0

Line Resistance: 1.0

Transmission Line:  
 A-B  
 B-C  
 C-D  
 D-A

$E = 1 \text{ V/km}$

Rotate Electric Field: 48.56

Click to plot GIC for this transmission line (C-D)

Click to plot GIC for this substation (A)

In this example, GIC for substation A is plotted for all angles (360 degrees) of the electric field.

It is also possible to plot GIC for the connecting lines.

The diagram shows a square network of transmission lines connecting substations A, B, C, and D. Each side of the square is 100 km long. Substations B and C are at the top, while A and D are at the bottom. Substation A is highlighted with a red circle, and the C-D line is also highlighted with a red circle. The graph below shows the GIC (A) for substation A as a function of the electric field angle (Degree). The GIC values range from approximately -100 A at 0 and 360 degrees to a peak of 100 A at 180 degrees.

Degree	GIC (A)
0	-100
10	-95
20	-85
30	-70
40	-50
50	-30
60	-10
70	10
80	30
90	50
100	70
110	85
120	95
130	100
140	100
150	95
160	85
170	70
180	50
190	30
200	10
210	-10
220	-30
230	-50
240	-70
250	-85
260	-95
270	-100
280	-95
290	-85
300	-70
310	-50
320	-30
330	-10
340	10
350	30
360	50