MPTS used with a Generator

MPTS

MAXIMUM POWER TRANSFER SOLUTION

IS THE NEXT GENERATION

POWER QUALITY SOLUTION



One line drawing for MPTS position on a Generator Application

Real time Dynamic Solution

Generator: 1000 KVA



ELECTRICAL PANEL

Breaker

SUB PANEL

Multiple Loads
Total = 700 KW
Maximum

Without MPTS	line a	line b	line c
Connected Load- max KW	700	700	700
Generator Rating-KVA	1000	1000	1000
PF	0.70	0.70	0.70
Voltage	480	415	400
Current	1203	1391	1443

Note:
The Generation source can also be
Solar, Geo Thermal, or Wind Power or a combination.

Assumption: average load PF = 0.70

One line drawing for MPTS position on a Generator Application

Real time Dynamic Solution

Generator: 1000 KVA



ELECTRICAL PANEL

Breaker

SUB PANEL

Multiple Loads
Total = 700 KW
Maximum

Without MPTS	line a	line b	line c
Connected Load- max KW	700	700	700
Generator Rating-KVA	1000	1000	1000
PF	0.70	0.70	0.70
Voltage	480	415	400
Current	1203	1391	1443

Note:
With MPTS, the same generation source can support additional loads.

Generator:1000 KVA



M P T S

ELECTRICAL PANEL

Breaker

SUB PANEL

Multiple Loads
Total = 700 KW

Benefit – additional capacity available with the same Generator

Breaker

SUB PANEL

Add additional
Loads up to
Total = 200 KW

Assumption: average load PF = 0.70

With MPTS	line a	line b	line c
Connected Load- max KW	900	900	900
Generator Rating-KVA	1000	1000	1000
PF	0.90	0.90	0.90
Voltage	480	415	400
Current	1203	1391	1443

One line drawing for MPTS position on a Generator Application

Real time Dynamic Solution

Generator: 1000 KVA



ELECTRICAL PANEL

Breaker

SUB PANEL

Multiple Loads
Total = 700 KW
Maximum

Without MPTS	line a	line b	line c
Connected Load- max KW	700	700	700
Generator Rating-KVA	1000	1000	1000
PF	0.70	0.70	0.70
Voltage	480	415	400
Current	1203	1391	1443

Savings ROI

Note:
With MPTS, the rating of the generation source can be reduced to support the existing/same loads.

M P T S

Generator:750 KVA



Benefit: Use a smaller Generator to support the same load

ELECTRICAL PANEL

Breaker

SUB PANEL

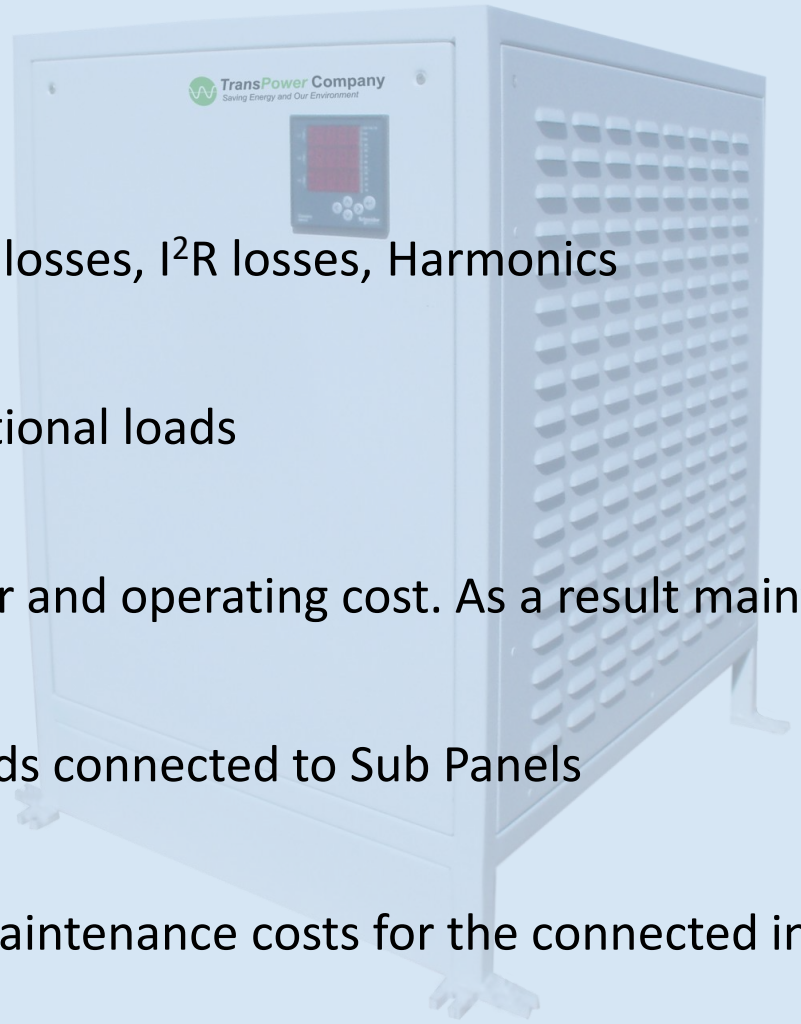
Multiple Loads
Total = 700 KW

With MPTS	line a	line b	line c
Connected Load- max KW	700	700	700
Generator Rating-KVA	750	750	750
PF	0.93	0.93	0.93
Voltage	480	415	400
Current	902	1043	1083

Assumption:
Average load PF = 0.70

MPTS on a Generator Application

MPTS BENEFITS:



- ✓ **Decreases** Current, KVA, KVAr losses, I^2R losses, Harmonics
- ✓ **Releases** Capacity to run additional loads
- ✓ **Reduces** load on the generator and operating cost. As a result maintenance cost also reduces
- ✓ **Increases** efficiency of the loads connected to Sub Panels
- ✓ **Reduces** service, repair and maintenance costs for the connected inductive loads