APS Major Transmission Facilities

Moenkopi 500kV Switchyard

Ownership:

APS	14%
SRP	21.7%
TEP	7.5%
NEV	11.3%
LADWP	21.2%
WAPA	24.3%

Four Corners and Eldorodo Reactors:

APS	24.7%
SRP	38.3%
TEP	13.3%
WAPA	23.7%

Westwing Reactors:

APS	100%

In Service 1969
No Transformers
4 – 500kV Reactor Banks (Single and Three Phase)
Adequate spacing between reactor banks

Navajo 500kV Switchyard

Ownership:

APS	14%
SRP	21.7%
TEP	7.5%
NEV	11.3%
LADWP	21.2%
WAPA	24.3%

Westwing Reactors:

APS	24.7%
SRP	38.3%
TEP	13.3%
WAPA	23.7%

Crystal Reactors:

NEV	26.1%
LADWP	48.9%
WAPA	25%

In Service 1975
No Transformers
2 – 500kV Reactor Banks (Single Phase)
Adequate spacing between reactor banks

North Gila Substation

Switchyard:

APS	66.7%
SD&G	28.5%
IID	4.8%

Line Reactors:

APS	11%
SD&G	76.22%
IID	12.78%

Substation:

APS	100%

In Service 1983
1 – 500kV 500/69kV Transformer Bank (Single Phase)
Fire walls to be added with transformer addition in 2005
1 – 500kV Reactor Bank (Single Phase)

Saguaro Substation

Switchyard and Substation:

APS	100%

Tortolita:

TEP	100%

In Service 1954…..1978…
2 – 500/115kV Transformers (Three Phase)
Adequate spacing between transformers
1 – 500kV Reactor Bank (Single Phase)
2 – 230/115kV Transformers (Three Phase)
Adequate spacing between transformers

Westwing 500kV Substation

500kV Substation Ownership

Navajo/Moenkopi:

APS	24.7%
SRP	38.3%
TEP	13.3%
WAPA	23.7%

Palo Verde:

APS	34.6%
SRP	34.6%
PNW	12.1%
EL PASO	18.7%

Perkins:

SRP	100%

500kV Substation Ownership

Westwing 230kV (T1 and T4 Banks)

APS	28.5%
SRP	44.2%
WAPA	27.3%

Westwing 230kV (T10 Bank)

APS	43.95%
SRP	43.95%
PNW	12.1%

TEP 345kV (T7 Bank):

TEP	100%

In Service 1973

4 Transformer Banks 500/230kV, 500/345kV (Single Phase)

Fire walls to be added with transformer replacements in 2005 and 2006

3 – 500kV Reactor Banks (Single Phase and Three Phase)

Adequate spacing between reactor banks

Westwing 230kV Substation

230kV Switchyard Ownership

Common:

APS	32.1%
SRP	36.1%
WAPA	31.8%

T-10:

APS	43.95%
SRP	43.95%
PNW	12.1%

Waddell:

WAPA	100%

230kV Substation Ownership

APS	100%

In Service 1986
2 Transformers 230/69kV (Three Phase)
1 – 230kV Reactor Bank (Three Phase)

Yavapai Substation

Switchyard and Substation:

APS	100%

In Service 1996
2 – 500/230kV Transformers (Three Phase)
Adequate spacing between transformers
1 – 230/69kV Transformer (Three Phase)

Preacher Canyon Substation

Switchyard and Substation:

APS	100%

In Service 1981
2 – 345/69kV Transformers (Three Phase)
Adequate spacing between transformers

Four Corners Substation

500kV Switchyard

APS	43.33%
SCE	32%
EPE	4.67%
PSNM	8.66%
SRP	6.67%
TEP	4.67%

500kV/345kV Transformers:

APS	15%
SCE	48%
EPE	7%
PSNM	13%
SRP	10%
TEP	7%

345kV Substation

APS	40.23%
SCE	12%
EPE	10.5%
PSNM	22.62%
SRP	10%
TEP	4.85%

345kV Substation

APS	40.23%
SCE	12%
EPE	10.5%
PSNM	22.62%
SRP	10%
TEP	4.85%

Connection to 345kV Substation

APS	19.25%
SCE	43.2%
EPE	6.3%
PSNM	12.95%
SRP	12%
TEP	6.3%

230kV Switchyard

APS	Varies %
SCE	Varies %
EPE	Varies %
PSNM	Varies %
SRP	Varies %
TEP	Varies %

In Service 1962
1 – 500/345kV Transformer Bank (Single Phase)
Fire walls to be added in 2004/2005
2 – 345/230kV Transformer (Three Phase)
Adequate spacing between transformers
1 – 230/69kV Transformers (Three Phase)
1 – 500kV Reactor (Single Phase)
2 – 345kV Reactor (Single Phase and Three Phase)
Adequate spacing between reactor banks

Cholla Substation

Switchyard and Substation:
APS 100%

In Service 1961
2 – 500/345kV Transformer Banks (Single Phase)
1 – 500kV Reactor Bank (Single Phase)
1 – 345/230kV Transformer (Three Phase)
1 – 345/69kV Transformer (Three Phase)
1 – 230kV Reactor (Three Phase)
1 – 230kV Transformer (Three Phase)

Pinnacle Peak Substation

Switchyard and Substation:
APS 100%

In Service 1962
3 – 345/230kV Transformers (Three Phase)
Adequate spacing between transformers
2 – 230/69kV Transformers (Three Phase)
Adequate spacing between transformers