SALT RIVER PROJECT

10 YEAR PLAN
2009 — 2018

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SALT RIVER PROJECT

TEN-YEAR PLAN

2009 - 2018

Prepared for the

Arizona Corporation Commission

January 2009

SALT RIVER PROJECT

OVERALL TRANSMISSION REVIEW

2009 - 2018

This report updates and replaces the ten-year transmission plan of the Salt River Project Agricultural Improvement and Power District (SRP), submitted January 2008 pursuant to A.R.S. Section 40-360.02. The following general review is intended to complement and clarify the individual tabular pages included herein.

Any future facilities which might have appeared in previous ten-year plans, but which are not shown in this plan, are either completed or are no longer scheduled in the period covered.

REGIONAL PLANNING FORUMS

SRP continues to be involved in numerous regional planning organizations, providing technical support and leadership. SRP's primary goal in its involvement in these regional planning entities is to provide a reliable and economical transmission system connected to available energy sources to provide reliable power at reasonable prices to our customers.

The regional planning organizations operate in public forums, perform study work cooperatively, and develop plans in a collaborative fashion while disseminating study results to a broad spectrum of interested and affected parties. Load growth and generation dispatch dynamics continue to be the most challenging issues facing SRP, the state of Arizona, and the southwest with respect to meeting electric system reliability. The regional planning organizations are addressing these challenges and SRP relies on the results generated through these organizations to develop and submit its ten-year plan.

Some of the regional planning organizations in which SRP participates are the Western Electricity Coordinating Council (WECC), specifically the Planning Coordination Committee (PCC) and the Transmission Expansion Planning Policy Committee (TEPPC). SRP also participates in the transmission planning activities of WestConnect. WestConnect is comprised of 13 utility companies with transmission assets in 8 different states in the western United States that collaboratively assess stakeholder needs and develop cost-effective transmission enhancements. WestConnect is committed to coordinating its work with other regional industry efforts to achieve as much consistency as possible in the Western Interconnection. The WestConnect Planning Committee completed and approved its first annual Ten Year Transmission Plan in January 2008. SRP's transmission plans are included as part of the January 2009 WestConnect Ten Year Transmission Plan. The Southwest Area Transmission Planning Group (SWAT), with its technical study subcommittees, work groups and task forces address future needs on a subregional basis. SRP is engaged in all SWAT activities and is specifically relying on the following SWAT entities to meet obligations for the ACC and Ten Year Plan filing: Central Arizona Transmission System – High Voltage (CATS-HV), CATS – Extra High Voltage (EHV), Colorado River Transmission System (CRT), Southern Arizona Transmission System (SATS), Short Circuit Work Group, Renewable Energy Transmission Task Force, and Common Corridor Task Force. SWAT disseminates all of its work publically and coordinates its studies and data with other subregional planning groups and WestConnect.

500kV TRANSMISSION

The SRP 500kV transmission system is shown on Attachment A. This system provides major support to SRP's local transmission network and generally delivers bulk power from remote generation to the Valley.

Hassayampa - Pinal West

In May 2004, SRP, acting as project manager (for SRP, Arizona Public Service[1], Tucson Electric Power Company, Southwest Transmission Cooperative, Electric District 2, Electric District 3, and Electric District 4 of Pinal County), received a CEC (Case No. 124) for two parallel single circuit 500kV transmission lines from the Palo Verde hub (Hassayampa Switchyard) to a new Pinal West Substation in the Maricopa/Stanfield area. Determination of the centerline within the approved corridor for both of the lines was completed in 2007. The first line to Pinal West is built and was energized in October of 2008. The second line is currently beyond the ten-year planning timeframe; the timing of the second line will be dependent on load growth and location of future generation.

Pinal West – Abel (formerly Southeast Valley)/Browning

In August 2005, SRP received a CEC for this joint participation project (Case No. 126), with an amendment to the CEC approved in November 2005. Project participants include SRP, Tucson Electric Power Company, Southwest Transmission Cooperative, Electric District 2, Electric District 3, and Electric District 4 of Pinal County. This 500kV project begins at the Pinal West Substation and ends at the Browning Substation with intermediate interconnections at Santa Rosa, Pinal Central, Abel and Dinosaur substations. SRP was also granted authority to construct an optional 230kV circuit on the 500kV structures between the Santa Rosa and Abel Substations conditioned upon SRP providing appropriate study work to the Arizona Corporation Commission (ACC) to support the need for the 230kV circuit. SRP, in two separate submittals to the ACC dated August 11, 2006 and June 27, 2008, provided the necessary study work to support the need for the entire 230kV circuit from Santa Rosa Substation to the Abel Substation. The ACC approved SRP's need for the 230kV circuit in Decision Numbers 69183 (December 8, 2006) and 70610 (November 19,

[1] Arizona Public Service withdrew from participation in the project on September 15, 2005.

2008). The segment of the line from Abel to the Browning Substation was certificated for a double circuit 500/230kV transmission line and does not require additional study work.

SRP is in the process of designing and acquiring right-of-way for the individual segments that comprise this transmission line project and is constructing the project in segments. The 500kV circuit from Pinal Central (formerly Pinal South) to Browning is expected to be in service by 2011. The 500kV segment from Pinal West to Pinal Central is expected to be in service by 2013. The completion dates for the individual substations and the various segments of the 500 and 230kV circuits are discussed below.

Pinal West – Pinal Central Segment

The Pinal Central Substation was sited during the proceedings for the siting of the Pinal West to Browning 500kV line. The station was envisioned as a terminal for 500kV and 230kV transmission lines to bolster the EHV system in Pinal County and provide for delivery of power and energy to the Local Load Serving Entities (LLSE's). In the last two years, a number of entities have expressed interest in interconnecting to the 230kV and 500kV yards of this substation. This segment of the line includes an intermediate interconnection at Santa Rosa Substation. The segment from Pinal West to Santa Rosa is planned as a single circuit 500kV line and the segment from Santa Rosa to Pinal Central is planned as a double circuit 500/230kV line. The estimated in-service date for the Pinal Central Substation is 2011 and the Pinal West to Pinal Central segment of the 500kV line, including Santa Rosa, is planned for 2013.

Pinal Central – Browning Segment

The segment from Pinal Central to the Browning Substation is planned as a double circuit 500/230kV line and is expected to be in-service in 2011. The segment is needed to provide for access to the recently certificated TransCanada Coolidge Generating Station that is proposed for

the area of which SRP has entered into a purchase power agreement to take the full output of the plant and to other new generating resources that may be developed in the area and that may be available to SRP customers. The Abel 500kV Substation currently has a “To Be Determined” in-service date. The purpose of the Abel Substation is twofold. It will provide interconnections into the EHV system to bring generation resources into the SRP service territory and it will also provide service to native SRP load. Either of these drivers could move the in-service date of the 500kV portion of Abel forward. The proposed Abel Substation will also include a co-location of a proposed 230/69kV substation, referenced as RS22. The RS22 (230/69kV portion of Abel) Substation’s expected in-service date is 2011.

Dinosaur – Browning Segment

The 230kV portion of the double circuit 500/230kV transmission line from Dinosaur Substation to the existing Browning Substation in the Southeast Valley was completed in 2007. The poles to accommodate the 500kV circuit were installed in 2007 as part of the 230kV construction. The 500kV component is anticipated to be in-service in 2011 as part of the Pinal Central to Browning line.

Sugarloaf

APS has made a request to interconnect into SRP’s Coronado – Cholla 500kV line to provide service to Sugarloaf, a new 69kV distribution substation north of Snowflake, Arizona. The expected completion date for this project is 2009. SRP is showing this in its ten-year plan for informational purposes, as this is an APS need that impacts SRP facilities.

TS9 – Pinnacle Peak

SRP is participating in the plan for a new 500kV line from the proposed TS9 Substation (planned to be constructed in the vicinity of the Raceway Substation) to a newly developed 500kV station at

the Pinnacle Peak complex. SRP is not participating in the 230kV component of this project. APS is the project manager and received a CEC for this project in February 2007 (Case No. 131). This project reflects a 2010 in-service date.

Tortolita – Pinal Central

Tucson Electric Power Company (TEP) is planning a 500kV transmission line to connect their interest in the Hassayampa – Pinal West – Pinal Central transmission lines and the Pinal Central Substation to their existing Tortolita Substation on the north end of Pima County. The purpose of the line for TEP is to reinforce the EHV system and provide a higher capacity link for the flow of power from the Palo Verde area into TEP's northern service territory. TEP is the project manager and SRP is participating in the project for access to possible resource additions in Pima and Pinal Counties. TEP expects to file for a CEC in 2009. The parties expect that the Tortolita – Pinal Central line will be in-service in 2013.

SunZia Southwest Transmission Project

Southwestern Power Group is the project manager for a group of utilities and transmission investors developing a 500kV system (two 500kV lines) from the central part of New Mexico to central Arizona. SunZia is considering Pinal Central as one of the terminations for connecting to the central Arizona system. SRP's participation in this transmission line will provide SRP access to anticipated renewable generation resources in southeastern Arizona and New Mexico. Southwestern Power Group has initiated the federal permitting process in compliance with NEPA (National Environmental Policy Act) procedures. Southwestern Power Group will file for a CEC for the Arizona portion of the project in future years. The project currently is scheduled for an in-service date of late 2013.

Palo Verde - North Gila #2

SRP participated in the siting and permitting of a new 500kV line from the Palo Verde Switchyard to the North Gila 500/69kV Substation. This new line will provide SRP with access to geothermal resources in the Imperial Valley area of California. APS is the project manager and received a CEC for this project from the ACC in January 2008 (Case No. 135). The estimated in-service date for this line is 2014.

Palo Verde – Sun Valley, Sun Valley – TS9

SRP is participating in the siting and permitting work for two new 500kV lines. The first line is from the Palo Verde Nuclear Generating Station (or a new switchyard at Arlington Valley Energy facility) to a new 500/230kV station, Sun Valley, to be located on the south side of the Central Arizona Project near the Hassayampa Pump Station (approximately T4N, R4W). APS received a CEC (Case No. 128) for this segment of the project in August 2005. The second line will originate from Sun Valley and terminate at a new 500kV station (TS9) to be sited near the existing Raceway 230kV Substation in northwest Phoenix. The location of the TS9 Substation was sited as part of the TS9 to Pinnacle Peak Project (Case No. 131). The application for a CEC for this line was filed on July 1, 2008 (Case 138). The Arizona Power Plant and Transmission Line Siting Committee approved the CEC on December 29, 2008. The CEC is pending approval by the ACC. APS is the project manager. This project is reflected in two separate detail sheets: Palo Verde – Sun Valley (TS5) and Sun Valley (TS5) - TS9. The parties expect that the Palo Verde – Sun Valley line will be in-service in 2014 and the Sun Valley – TS9 line to be completed by 2016.

Pinal Central – Abel – RS20

System impact studies indicate the need for additional 500kV transmission into the southeast corner of SRP's service territory. RS20 is proposed for an area north and east of the Abel Substation site within the Arizona State Trust Lands referred to as the Superstition Vistas.

Conversion of this area from State Trust Land to private ownership will result in a load increase to SRP's system nearly doubling the current SRP system load. As resources are developed, or considered to be developed to serve this increase in load, available transmission capacity is required to meet reliability requirements. The estimated in-service date for the 500kV line from Pinal Central – Abel is 2020 while the line from Abel – RS20 is yet to be determined.

RS20 – Silver King – Coronado

As SRP considers renewable resources to serve SRP load, the possible locations of these resources may require additional transmission from the northeastern portion of Arizona into SRP's load pocket. This project also increases load service capability to the Superstition Vistas area. As the need for additional transmission is refined, SRP will define the scope and timing of the project.

230kV TRANSMISSION

The SRP 230kV transmission system is shown on Attachments B (eastern 230kV system) and C (western 230kV system). SRP's 230kV transmission network is used to transmit power from the bulk power stations on the periphery of the Phoenix metropolitan area to the various load centers in SRP's service territory. Additional transmission capacity will be required during the next ten years to meet load growth and for system reliability.

Moody (RS17) - RS24 - Abel (formerly Southeast Valley)

Study work based on load projections for the Southeast Valley indicate the need to provide additional transformer capacity to meet residential, commercial, and industrial load requirements. The RS24 Substation, to be located in the Queen Creek area, and the double-circuit transmission lines connecting the substation to the system will provide the additional necessary capacity. This project will be staged with the first 230kV line in service by 2012. The second line is needed by

2014 and the RS24 Substation will be connected to the lines in 2016. SRP anticipates filing its CEC application in 2009.

Desert Basin Power Line Project (Desert Basin – Pinal Central)

SRP was awarded a CEC (Case No. 132) for the construction of this 230kV line in June 2007 in Decision Number 69647 by the ACC. This project consists of two components. The first component is approximately six miles of new 230kV transmission line originating at the Desert Basin Generating Station in Casa Grande and terminating at the junction of Thornton Road and Cornman Road where it will intersect with the already certificated Pinal West – Abel/Browning 500/230kV Project (Case No. 126, Decision Number 68093). The second component of the project will utilize the 500/230kV Pinal West – Abel/Browning route, where SRP will attach the 230kV circuit to the 500kV structures for approximately 15 miles to the Pinal Central Substation south of Coolidge. SRP received approval for the addition of the 230kV component to the 500kV structures in Decision Number 69183 (Condition No. 23 in Case No. 126). This project is expected to be constructed in conjunction with the Pinal West to Pinal Central segment of the Project. The expected in-service date is 2013.

RS26 (formerly Fountain Hills)

SRP has identified the need for a 345/69kV, 230/69kV or 115/69kV receiving station in the Fountain Hills area. The projected load in the area will stress the underlying 69kV system to its limits by approximately 2014. Three methods of serving this station are being investigated. One method is to use the 115kV system and to construct a line from either Goldfield or Stewart Mountain into the Fountain Hills area. Another possibility is to construct a 230kV line from Goldfield (along the Salt River) into the Fountain Hills area. The third alternative is to interconnect to the APS Cholla - Pinnacle Peak 345kV line that runs north of the Rio Verde area. The option and final

line routing will be determined through a public and environmental process to support preparation of an application for a CEC. SRP anticipates filing its CEC application in 2010.

Moody (RS17)

SRP has identified the need for the future RS17 230/69kV Receiving Station in the Gilbert/Queen Creek area to support the forecasted customer load growth for the area. However, the need date has moved beyond SRP's ten-year planning window. The station site was established during a previous environmental study for the RS16 (Schrader) transmission line siting process (Case No. 86). Initial service to the RS17 Receiving Station will utilize existing transmission lines constructed in 1998 for the Schrader Project.

Dinosaur – RS21

SRP has included a potential line from the existing Dinosaur (RS19) Receiving Station extending to the east to a proposed RS21 Receiving Station to serve a portion of the Superstition Vistas area. This project would support the future load growth requirements in the East Valley/north Pinal County portion of SRP's service territory. The RS21 Receiving Station is projected to be interconnected with the Browning Substation and RS20 Receiving Station. While the anticipated need for this project is beyond SRP's ten-year planning window, SRP is including this project in the event the project schedule is accelerated.

Potential Future Projects

A key element of SRP's transmission planning function is to utilize existing transmission corridors and open circuit positions on existing transmission structures, where feasible. The following projects have been included in this plan as informational items that may become firm plans, as system studies look farther into the future. These potential projects include:

- Rogers to Browning

- Silver King to Browning
- Silver King to Browning 230kV/Superior tie
- Thunderstone to Santan
- Pinnacle Peak to Brandow with a possible loop into Rogers or Thunderstone
- Rogers to Corbell
- Westwing – Pinnacle Peak (this line is essentially replaced by the TS9 – Pinnacle Peak 500kV Project being managed by APS.)

When system conditions are such that these facilities are needed, more definitive descriptions and schedules will be provided.

SRP continues to assess its transmission needs in the northern Pinal County and eastern Maricopa County to accommodate the tremendous growth in that area. On Attachment B, SRP's eastern 230kV system, we show some concepts of a plan to provide for the growth envisioned in the area. These facilities are not described in detail in the narrative of this report but are included in the description sheets because while the need is apparent, the timeframe is beyond that of this plan.

SRP is identifying new requirements for future generation. Logical locations for new generation exist throughout Arizona. As noted previously, the Pinal Central – Abel 230kV segment of the Southeast Valley Project will be utilized to connect the TransCanada Coolidge Generating Station to SRP's load service territory. The in-service date for this project is currently projected for 2011.

EASTERN MINING AREA TRANSMISSION

Additional transmission facilities will eventually be required in SRP's Eastern Mining Area (Attachment D). If mining loads increase between Superior and Hayden, a 230kV line from Silver King to New Hayden may be required. Depending on where new load is added, this 230kV line

may have an intermediate termination at Knoll Station. The line may be constructed in phases, with the Silver King to Knoll line being constructed first, followed by Knoll to New Hayden line, when required. The existing 115kV line from Kearny to Hayden will be looped into the New Hayden Station. The in-service dates for these lines are contingent upon customer need, but are currently projected beyond this ten-year plan.

Attached as Appendix 1 to this report is a summary of SRP study work that justifies the new projects identified in the Ten Year Plan. Study work for joint projects rely on subregional and previously submitted studies.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2009

LINE DESIGNATION:		Sugarloaf (APS) Loop-in of Coronado – Cholla 500kV line
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	240MVA
(c)	Point of Origin	Coronado-Cholla 500kV line SEC 9, T14N, R21E
(d)	Point of Termination	A new Sugarloaf Substation SEC 9, T14N, R21E
(e)	Length	Loop-in of existing line immediately adjacent to substation

ROUTING: The Sugarloaf Substation will be built adjacent to the existing Coronado – Cholla 500kV line.

PURPOSE: Provide service to residential loads in Show Low and the surrounding area.

DATE:

(a)	Right of Way/Property Acquisition:	N/A
(b)	Construction to Start:	2008
(c)	Estimated In-Service Date:	2009

NOTES:
SRP is responding to an interconnection request from APS. This project entails building a new station immediately adjacent to an existing line. APS is the lead and project manager for this project.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2010

LINE DESIGNATION:		TS9 – Pinnacle Peak
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	To be determined
(c)	Point of Origin	A new TS9 500kV Substation (adjacent to the Navajo -Westwing 500kV line and near the existing Raceway Substation) SEC 33, T6N, R1E
(d)	Point of Termination	Pinnacle Peak 500kV Substation SEC 10, T4N, R4E
(e)	Length	Approximately 26 miles

ROUTING: South from TS9 substation approximately 2 miles, generally paralleling the Navajo-Westwing 500kV lines, then turning east at approximately Dove Valley Road to approximately Interstate 17. At Interstate 17 the line heads south to Happy Valley Road where it turns east to the Pinnacle Peak substation, paralleling the existing 230kV transmission line corridor.

PURPOSE: This line is a result of joint planning through the SWAT forum. The project will increase the import capability of the system serving the Phoenix Metropolitan area and strengthen the transmission system on the east side of the Phoenix Metropolitan valley. The loop-in of the Navajo - Westwing 500kV line into TS9 will be part of the project.

DATE:

(a)	Right of Way/Property Acquisition:	2007
(b)	Construction to Start:	2008
(c)	Estimated In-Service Date:	2010

NOTES:
CEC for Case No. 131 was awarded in February 2007 (ACC Decision # 69343). SRP is a participant; APS is the lead and project manager.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2011/2013

LINE DESIGNATION:		Pinal West – Abel (Southeast Valley)/Browning
SIZE:		
(a)	Voltage	500kV / 230kV
(b)	Capacity	1500MVA
(c)	Point of Origin	Pinal West Substation SEC 18, T5S, R2E
(d)	Intermediate Point	Pinal Central Substation (formerly Pinal South) SEC 30, T6S, R8E
(e)	Intermediate Point	Santa Rosa substation SEC 30, T5S, R4E
(f)	Intermediate Point	Abel Substation (formerly Southeast Valley and RS22) SEC 19, T3S, R9E
(g)	Intermediate Point	Dinosaur Substation SEC 10, T2S, R8E
(h)	Point of Termination	Browning Substation SEC 12, T1S, R7E
(i)	Length	Approximately 100 miles

ROUTING: South and east from the Pinal West substation to approximately Teel Road, then east to the vicinity of the Santa Rosa substation. From Santa Rosa easterly to approximately the Santa Rosa Wash, then generally south to approximately a half mile north of I-8 where it turns east again. Then it runs easterly to about the location of the ED2 substation (Sec 25, T6S, R7E). From that point the line continues east to the Union Pacific Railroad, where it turns north. It generally runs north from this point to the Abel (formerly Southeast Valley) substation in the vicinity of the Magma Railroad and the CAP (approximate location of the Abel substation), then north along the CAP to the existing 500kV corridor between Elliot and Guadalupe Roads. At that point it turns west into the Browning substation.

PURPOSE: The Central Arizona Transmission System Study identified a number of system additions necessary to accommodate load growth and access to energy sources in the central Arizona area. This transmission line is the second segment of a series of transmission lines to serve the central Arizona region. This segment will initially

provide an interconnection with the Palo Verde market area to market power to the Phoenix and central Arizona areas, and to accommodate the growth in development and population in Pinal County.

DATE:

(a)	Right of Way/Property Acquisition:	2005
(b)	Construction to Start for Remainder of Project:	2009
(c)	Est. In-Service for Santa Rosa Interconnection	2013
(d)	Est. In-Service for Pinal West to Pinal Central 500kV:	2013
(e)	Est. In-Service for Pinal Central:	2011
(f)	Est. In-Service for Pinal Central to Abel 500kV:	2011
(g)	Est. In-Service for Abel 500kV:	To be determined
(h)	Est. In-Service for Abel 230kV:	2011
(i)	Est. In-Service for Abel to Dinosaur 230kV:	2011
(j)	Est. In-Service for Abel to Dinosaur 500kV:	2011
(k)	Actual In-Service for Dinosaur:	2007
(l)	Actual In-Service for Dinosaur to Browning 230kV:	2007
(m)	Est. In-Service for Dinosaur to Browning 500kV:	2011

NOTES:

CEC for Case No. 126 was awarded in 2005 (ACC Decision # 68093 and # 68291)

SRP is lead and project manager for the development of this project. Participants include SRP, Tucson Electric Power, Southwest Transmission Cooperative, and Electric Districts 2, 3, and 4 of Pinal County.

January 2009

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2011

LINE DESIGNATION:		Pinal Central – Abel
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Pinal Central (formerly Pinal South) SEC 30, T6S, R8E
(d)	Point of Termination	Abel (formerly Southeast Valley) SEC 19, T3S, R9E
(e)	Length	Approximately 30 miles

ROUTING: Second circuit on Pinal West to Browning 500kV line

PURPOSE: This transmission line was identified as a component of the CATS-HV Pinal County system study. SRP anticipates using the circuit for the delivery of remote generation in the area to the load service territory.

DATE:

(a)	Right of Way/Property Acquisition:	As part of the Pinal West to Browning Project
(b)	Construction to Start:	2010
(c)	Estimated In-Service Date:	2011

NOTES:
The authorization for this line is provided for in the CEC for Case No. 126 (Pinal West to Browning), which was awarded in 2005 (ACC Decision # 68093 and # 68291). SRP was awarded ACC Decision # 70610 in 2008 allowing attachment of the 230kV line to the formerly approved 500kV structures.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2012/2016

LINE DESIGNATION: Moody (RS17) - RS24 – Abel 230kV
SIZE:

(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	RS17 Substation SEC 1, T2S, R6E
(d)	Intermediate Point	Future RS24, Queen Creek area To be determined (T1 or 3S, R7 or 8E)
(e)	Point of Termination	Abel Substation SEC 19, T3S, R9E
(f)	Length	Approximately 20 miles

ROUTING: Generally south and east from a point on the Santan to Schrader 230kV line near the future Moody (RS17) substation to the proposed RS24 substation in the south and east of the Queen Creek area, continuing south and east to the future Abel substation.

PURPOSE: To meet expected load growth in the eastern distribution area.

DATE:

(a)	Right of Way/Property Acquisition:	2010
(b)	Construction to Start:	2011
(c)	Estimated In-Service Date:	
	1st Circuit	2012
	2nd Circuit	2014
	RS24 Station	2016

NOTES:
SRP anticipates filing an application for a CEC in 2009.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2013

LINE DESIGNATION:		Tortolita to Pinal Central
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	To be determined MVA
(c)	Point of Origin	TEP Tortolita Substation SEC 14, T10S, R10E
(d)	Point of Termination	Pinal Central SEC 30, T6S, R8E
(e)	Length	To be determined through the siting process

ROUTING: Subject to completion of the siting process. Generally north from Tortolita to the Pinal Central Substation

PURPOSE: Provide access to possible resources in Pima and Pinal Counties.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	2013

NOTES:
Tucson Electric Power is the lead for and project manager for this project. SRP is a participant in the siting of the transmission line and anticipates participating in the development of the project.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2013

LINE DESIGNATION:		SunZia Southwest Transmission Project
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	To be determined MVA
(c)	Point of Origin	Central New Mexico
(d)	Point of Termination	Pinal Central Substation SEC 30, T6S, R8E
(e)	Length	460+ miles

ROUTING: From Lincoln County area in central New Mexico to Pinal Central Substation in Coolidge, Arizona

PURPOSE: Access renewable resources to comply with Renewable Portfolio requirements

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	2013

NOTES:
Southwestern Power Group is the lead and project manager on the development of this project. SRP is a participant.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2013

LINE DESIGNATION:		Desert Basin – Pinal Central
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	To be determined
(c)	Point of Origin	Desert Basin Power Plant Switchyard SEC 13, T6S, R5E
(d)	Point of Termination	Pinal Central 230kV Substation SEC 30, T6S, R8E
(e)	Length	Approximately 21 miles

ROUTING: For approximately 6 miles from the Desert Basin Generating Station in Casa Grande near Burris and Kortsen Roads generally south and east to a point on the certificated SEV 500kV line near Cornman and Thornton Roads (vicinity of the proposed CATSHV03 Substation). Then the 230kV line will be attached to the 500kV structures for approximately 15 miles to the proposed Pinal Central Substation south of Coolidge, AZ.

PURPOSE: Remove the Remedial Action Scheme that was previously installed on Desert Basin Generating Station; improve reliability of the 230kV system in the region by reducing the loading on existing lines in the area; increase local area system capacity; reduce reliance on second party transmission system; create the first 230kV component of the CATS-HV proposed transmission system for the central Arizona area; and establish the Pinal Central Substation, identified as one of the future injection points of power and energy into the expanding central Pinal County load area, which will help local utilities serve local load.

DATE:

(a)	Right of Way/Property Acquisition:	2009
(b)	Construction to Start:	2012
(c)	Estimated In-Service Date:	2013

NOTES:
Authority for the portion of the 230kV line to be attached to the 500kV structures is provided for in the CEC granted in Case No. 126, awarded in 2005 (ACC Decision # 68093 and # 68291), and

subsequently confirmed in Decision # 69183, which approved SRP's compliance filing for Condition 23 of the CEC.

SRP was granted a CEC for Case No. 132 in June of 2007 (ACC Decision # 69647) for the approximately six mile portion of the project not previously permitted from Desert Basin Generating Station to the vicinity of Cornman and Thornton Roads south of Casa Grande.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2014

LINE DESIGNATION:		Palo Verde - North Gila #2 (APS)
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	To be determined
(c)	Point of Origin	Hassayampa switchyard, Arlington Valley Power Plant, or Redhawk Power Plant
(d)	Point of Termination	North Gila 500/69kV Substation SEC 11, T8S, R22W
(e)	Length	Approximately 110 miles of single-circuit line

ROUTING: This line will generally follow the route of the existing Hassayampa - North Gila 500kV #1 line.

PURPOSE: For SRP, this line will provide access to geothermal resources in the Imperial Valley area of California.

DATE:

(a)	Construction to Start:	2011
(b)	Estimated In-Service Date:	2014

NOTES:
CEC for Case No. 135 was awarded in January 2008.

SRP is a participant in this project; APS is the lead and project manager.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2014

LINE DESIGNATION:		Palo Verde – Sun Valley
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	To be determined
(c)	Point of Origin	Palo Verde Switchyard or a new switchyard at Arlington Valley Energy facility
(d)	Intermediate Point	Proposed Delany Switching Station Approximately SEC 25, T2N, R8W
(e)	Point of Termination	Sun Valley 500/230kV substation to be constructed SEC 29, T4N, R4W
(f)	Length	Approximately 45 miles of single-circuit line

ROUTING: Generally west from Palo Verde/Hassayampa and then north and east for approximately 45 miles.

PURPOSE: This line will provide a 500kV interconnection to the APS transmission system and serve projected need for electric energy in the area immediately north and west of the Phoenix Metropolitan area. The project will increase the import capability into the valley and the export capability out of the Palo Verde/Hassayampa area.

DATE:

(a)	Right of Way/Property Acquisition:	2005
(b)	Construction to Start:	2011
(c)	Estimated In-Service Date:	2014

NOTES:
CEC issued to APS in August 2005 for Case No. 128 (ACC Decision # 68063).

APS is the lead and project manager on the development of this project. SRP was a participant in the environmental siting work and anticipates being a participant in the development of the facilities.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2014

LINE DESIGNATION:		RS26 (Fountain Hills Station)
SIZE:		
(a)	Voltage	115kV, 230kV, or 345kV
(b)	Capacity	To be determined
(c)	Point of Origin	To be determined
(d)	Point of Termination	Fountain Hills Station Northeast Scottsdale/Fountain Hills area
(e)	Length	To be determined

ROUTING: SRP will embark upon a facilities siting/environmental assessment/public process to determine the location of the station and the transmission lines supplying the station. Contingent upon final plan of service for the station and the transmission lines supplying the station.

PURPOSE: Provide a source for the development occurring in and around the Fountain Hills area, as well as relieve the stress on the lower voltage system currently supplying the Fountain Hills/Rio Verde area.

DATE:

(a)	Right of Way/Property Acquisition:	2010
(b)	Construction to Start:	2012
(c)	Estimated In-Service Date:	2014

NOTES:
SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2016

LINE DESIGNATION:		Sun Valley – TS9 500kV
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	To be determined
(c)	Point of Origin	Sun Valley 500/230kV Substation SEC 29, T4N, R4W
(d)	Point of Termination	TS9 500kV Substation SEC 33, T6N, R1E
(e)	Length	Approximately 40 miles

ROUTING: The route for this project has not yet been determined. Generally the line will head north-northeast out of the Sun Valley substation and then east to the TS9 substation.

PURPOSE: This line will be needed to serve projected electric energy load in the area immediately north and west of the Phoenix Metropolitan area, and will increase the import capability into the Valley.

DATE:

(a)	Right of Way/Property Acquisition:	N/A
(b)	Construction to Start:	2013
(c)	Estimated In-Service Date:	2016

NOTES:
An application for a CEC was filed on July 1, 2008 (Case No. 138) and a final decision is pending before the ACC. SRP is a participant; APS is the lead and project manager.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2020/TBD

LINE DESIGNATION: Pinal Central – Abel – RS20

SIZE:

(a)	Voltage	500kV
(b)	Capacity	To be determined
(c)	Point of Origin	Pinal Central Substation SEC 30, T6S, R8E
(d)	Potential Intermediate Point	Abel Substation SEC 19, T3S, R9E
(e)	Point of Termination	Future RS20 Substation SEC ??, T2S, R10E
(f)	Length	Approximately 45 miles

ROUTING: Generally north from the Pinal Central substation to Abel, then north and east from Abel to a future RS20 substation as yet to be sited

PURPOSE: This line is required for delivery of remote resources into the southeast portion of SRP's service territory.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	2018
(c)	Estimated In-Service Date:	
	Pinal Central – Abel	2020
	Abel – RS20	To be determined

NOTES:
SRP anticipates filing an application for a CEC in approximately 2015.

January 2009

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Hassayampa - Pinal West
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	1500MVA
(c)	Point of Origin	Hassayampa Switchyard SEC 15, T1S, R6W
(d)	Point of Termination	Pinal West Substation SEC 18, T5S, R2E
(e)	Length	Approximately 51 Miles

ROUTING: South and east of the Hassayampa Switchyard along the existing Palo Verde - Kyrene 500kV line to a point where the gas pipeline splits from the transmission line, then generally along the pipeline (except in the Maricopa County Mobile Planning Area) to the new Pinal West Substation.

PURPOSE: The Central Arizona Transmission System Study identified a number of system additions necessary to accommodate load growth and access to energy sources in the central Arizona area. This project, comprised of two transmission lines, is one of the first segments of a series of transmission lines to serve the central Arizona region.

DATE:

(a)	Right of Way/Property Acquisition:	2004
(b)	Construction to Start:	To be determined
(c)	Actual In-Service Date: 1st line	October 2008
(d)	Estimated In-Service Date: 2nd line	To be determined

NOTES:
CEC for Case No. 124 was awarded in May 2004 (ACC Decision # 67012). SRP is lead and project manager for development of this project. Participants include SRP, Tucson Electric Power, Southwest Transmission Cooperative, and Electric Districts 2, 3, and 4 of Pinal County. The first of the two permitted transmission lines was placed in service in October 2008.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		RS20 – Silver King – Coronado Gen Station Line
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	To be determined
(c)	Point of Origin	Future RS20 Substation SEC ??, T2S, R10E
(d)	Intermediate Point	Silver King Substation Parts of SEC 15 & 16, T1S, R13E
(e)	Point of Termination	Coronado Generating Station SEC 32, T14N, R29E
(f)	Length	Approximately 200 miles

ROUTING: Generally north and east from the future RS20 substation in the north Florence area to the existing Silver King substation, then northerly and easterly to the Coronado Generating Station switchyard, actual route to be determined

PURPOSE: This line is required for delivery of remote resources into the southeast portion of SRP's service territory.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
SRP anticipates filing an application for a CEC in approximately 2015.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Palo Verde – Saguaro Line
SIZE:		
(a)	Voltage	500kV
(b)	Capacity	To be determined
(c)	Point of Origin	Palo Verde Generating Station Switchyard/Hassayampa Switchyard SEC 34, T1N, R6W
(d)	Potential Intermediate Point	Pinal West Substation SEC 18, T5S, R2E
(e)	Point of Termination	Saguaro Substation SEC 14, T10S, R10E
(f)	Length	Approximately 130 miles

ROUTING: Generally south and east from the Palo Verde area to a point near Gillespie Dam, then generally easterly until the point at which the Palo Verde – Kyrene 500kV line diverges to the north and east. The corridor then is generally south and east again adjacent to a gas line corridor until meeting up with the Tucson Electric Power Company's Westwing – South 345kV line. The corridor follows the 345kV line until a point due west of the Saguaro Generating Station. The corridor then follows a lower voltage line into the 500kV yard just south and east of the Saguaro Generating Station.

PURPOSE: This line is the result of the joint participation CATS study. The line will be needed to increase the adequacy of the existing EHV transmission system and permit increased power delivery throughout the state.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
A CEC was applied for and granted in March 1976 for this line (Case No. 24, ACC Decision # 46802). SRP is including this description sheet as a CATS participant with no defined in-service date.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Moody (RS17) Loop-In

SIZE:

(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	RS17 Substation SEC 1, T2S, R6E
(d)	Point of Termination	RS17 Substation SEC 1, T2S, R6E
(e)	Length	0

ROUTING: No new line construction.

PURPOSE: Service to customer load in the Gilbert/Queen Creek area.

DATE:

(a)	Construction to Start:	To be determined
(b)	Estimated In-Service Date:	To be determined

NOTES:
Authority for this work is included in the RS16 Project CEC (Case No. 86, ACC Decision # 59791 and # 60099).

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Dinosaur - RS21
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Dinosaur Substation SEC 10, T2S, R8E
(d)	Point of Termination	Future RS21, Florence Junction area To be determined (T1 or 2S, R10E)
(e)	Length	To be determined

ROUTING: Easterly from Dinosaur Substation (Queen Creek area) to the future RS21 Substation (Florence Junction area).

PURPOSE: To meet expected load growth in the eastern distribution area.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

January 2009

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Rogers – Browning
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Rogers Substation SEC 13, T1N, R5E
(d)	Point of Termination	Browning Substation SEC 12, T1S, R7E
(e)	Length	Approximately 9 miles

ROUTING: To be determined through environmental and public processes, but generally east and south from Rogers, using existing right of way, where possible.

PURPOSE: Provide adequate transmission facilities to deliver reliable power and energy to SRP's customers in the eastern valley area.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

January 2009

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Silver King - Browning
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Silver King Substation Parts of SEC 15 & 16, T1S, R13E
(d)	Point of Termination	Browning 500/230kV Substation SEC 12, T1S, R7E
(e)	Length	38 miles*

ROUTING: From Silver King in a westerly direction to Browning

PURPOSE: To deliver Coronado or other power in eastern Arizona into SRP's distribution service territory

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
A CEC exists for the segment of this line from the Browning Substation to a point on the Silver King – Kyrene 500kV line corridor in Apache Junction (T1S, R8E, Section 11 & 12) (Case No. 20).

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

* SRP proposes stringing 17 miles of conductor on existing lattice towers on Forest Service lands on structures built by Federal permit predating the AZ CEC process. The remaining 21 miles of the line will be new construction.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Silver King - Browning 230kV/Superior Tie
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Point on the Silver King to Browning 230kV transmission line SEC 34, T1S, R12E
(d)	Point of Termination	Superior Substation SEC 34, T1S, R12E
(e)	Length	Approximately 1/2 mile

ROUTING: Southeast from the proposed Silver King to Browning Line to the existing Superior Substation.

PURPOSE: To provide adequate transmission capacity to meet future load growth and/or to improve electric system reliability in SRP's eastern distribution service area.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Thunderstone - Santan
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Thunderstone Substation SEC 18 T1N R7E
(d)	Point of Termination	Santan Substation SEC 21 T1S R6E
(e)	Length	Approximately 13 miles

ROUTING: On existing structures with existing empty circuit position, or rebuilt to accommodate a second circuit position.

PURPOSE: To provide additional transfer capability from the south and east to the north and central areas of SRP's load service territory

DATE:

(a)	Right of Way/Property Acquisition:	N/A
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
This circuit will be on existing structures, or structures rebuilt to accommodate double circuit lines. This project may require a CEC depending on final configuration.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Pinnacle Peak - Brandow (with future tie into Rogers or Thunderstone)
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Pinnacle Peak Substation SEC 10, T4N, R4E
(d)	Point of Termination	Brandow Substation SEC 11, T1N, R4E
(e)	Length	To be determined

ROUTING: Use of available circuit position on existing SRP Pinnacle Peak – Papago Buttes 230kV structures from Pinnacle Peak to Brandow; easterly from a point on that line to a termination at either Rogers or Thunderstone.

PURPOSE: Provide adequate transmission capacity to accommodate SRP customer load.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
A CEC was awarded for this circuit as a part of Case No. 69, Pinnacle Peak – Brandow/Papago Buttes 230kV line, dated January 1985.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Rogers - Corbell
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Rogers Substation SEC 13, T1N, R5E
(d)	Point of Termination	Corbell Substation SEC 10, T1S, R5E
(e)	Length	Approximately 12 miles

ROUTING: Use of available circuit position on existing 230kV structures in the area.

PURPOSE: Provide adequate transmission capacity to accommodate future load growth.

DATE:

(a)	Right of Way/Property Acquisition:	N/A
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	To be determined

NOTES:
SRP will be using an open position on existing double circuit structures for its entirety. The line and structures were constructed prior to the siting statutes.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Silver King - Knoll - New Hayden
SIZE:		
(a)	Voltage	230kV
(b)	Capacity	875MVA
(c)	Point of Origin	Silver King Substation Parts of SEC 15 & 16, T1S, R13E
(d)	Intermediate Termination	Knoll Substation SEC 23, T3S, R13E
(e)	Point of Termination	New Hayden Substation SEC 7, T5S, R15E
(f)	Length	Approximately 35 miles

ROUTING: South from Silver King, looped into Knoll, continuing to the Hayden area.

PURPOSE: To increase the transmission capacity to serve a new mining load.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	Contingent upon customer need

NOTES:
SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

January 2009

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION:		Point on the Kearny - Hayden 115kV line to New Hayden; double circuit loop
SIZE:		
(a)	Voltage	115kV
(b)	Capacity	190MVA
(c)	Point of Origin	Point on Kearny - Hayden 115kV Line, SEC 7, T5S, R15E
(d)	Point of Termination	New Hayden Substation SEC 7, T5S, R15E
(e)	Length	Approximately 0.75 miles

ROUTING: Southwest from the existing Kearny - Hayden 115kV line to the New Hayden Transmission Station.

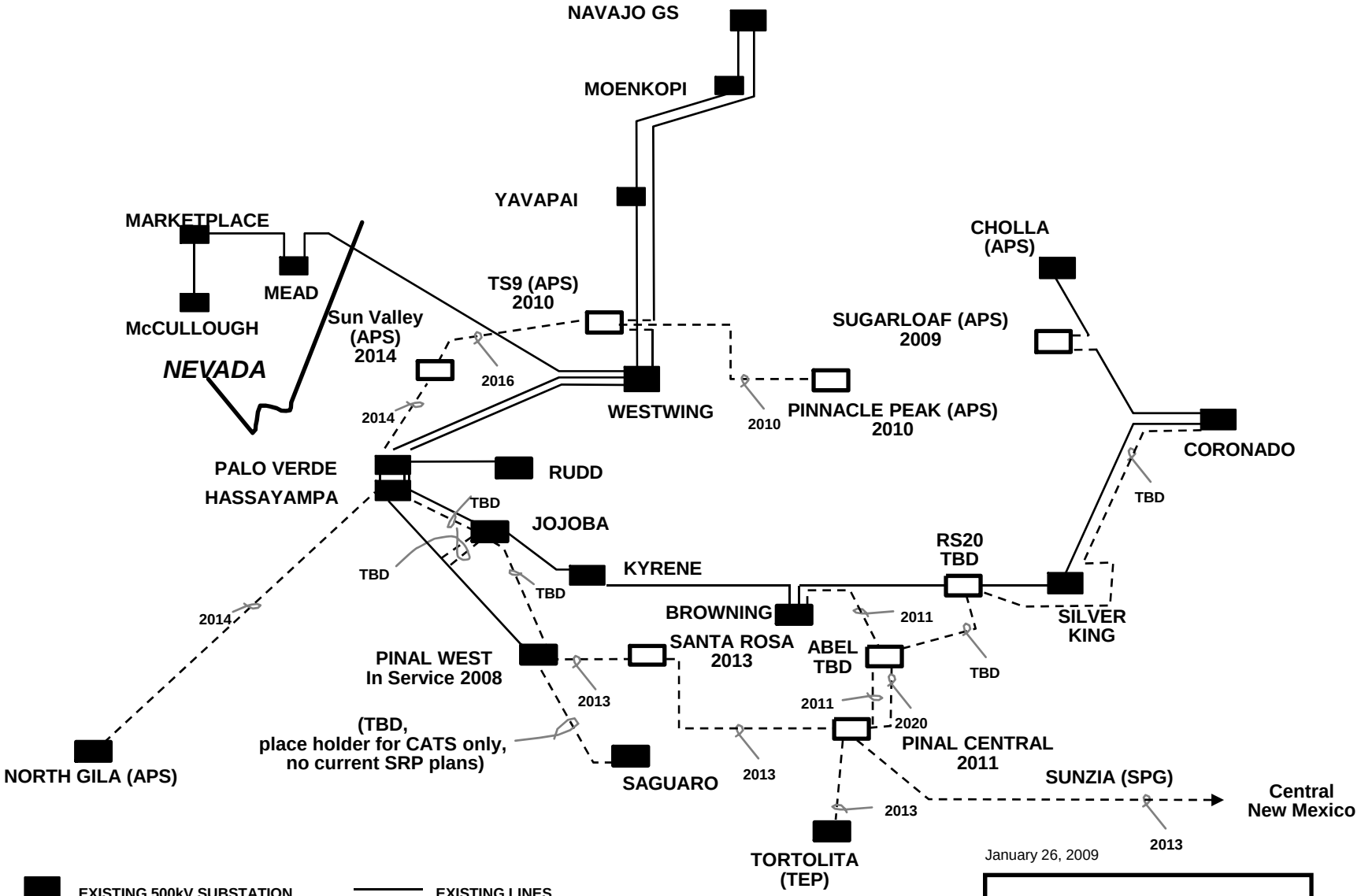
PURPOSE: To increase the transmission capacity to serve a new mining load.

DATE:

(a)	Right of Way/Property Acquisition:	To be determined
(b)	Construction to Start:	To be determined
(c)	Estimated In-Service Date:	Contingent upon customer need

NOTES:
SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

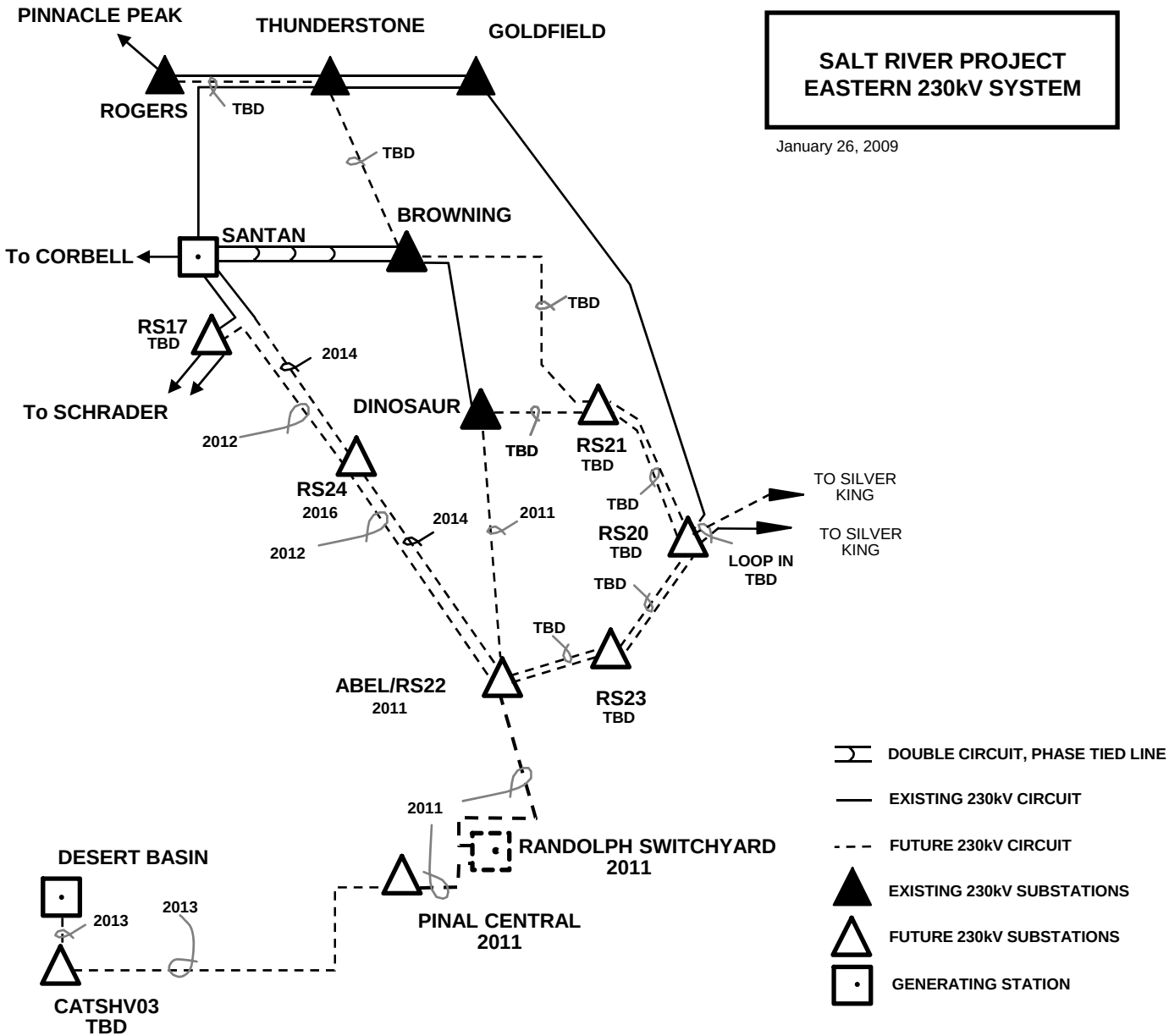
This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.


NAVAJO GS
MOENKOPI
YAVAPAI
MARKETPLACE
MEAD
McCULLOUGH
NEVADA
Sun Valley (APS) 2014
TS9 (APS) 2010
2016
2014
WESTWING
2010
PINNACLE PEAK (APS) 2010
SUGARLOAF (APS) 2009
CHOLLA (APS)
CORONADO
TBD
PALO VERDE
HASSAYAMPA
RUDD
TBD
JOJOBA
TBD
TBD
KYRENE
RS20 TBD
2014
BROWNING
2011
SILVER KING
PINAL WEST In Service 2008
SANTA ROSA 2013
ABEL TBD
TBD
2013
2011
2020
PINAL CENTRAL 2011
(TBD, place holder for CATS only, no current SRP plans)
2013
SUNZIA (SPG)
Central New Mexico
NORTH GILA (APS)
SAGUARO
2013
2013
TORTOLITA (TEP)
EXISTING 500kV SUBSTATION
FUTURE 500kV SUBSTATION
EXISTING LINES
FUTURE LINES
January 26, 2009
SALT RIVER PROJECT
500kV SYSTEM
ATTACHMENT A

ATTACHMENT B

SALT RIVER PROJECT
EASTERN 230kV SYSTEM

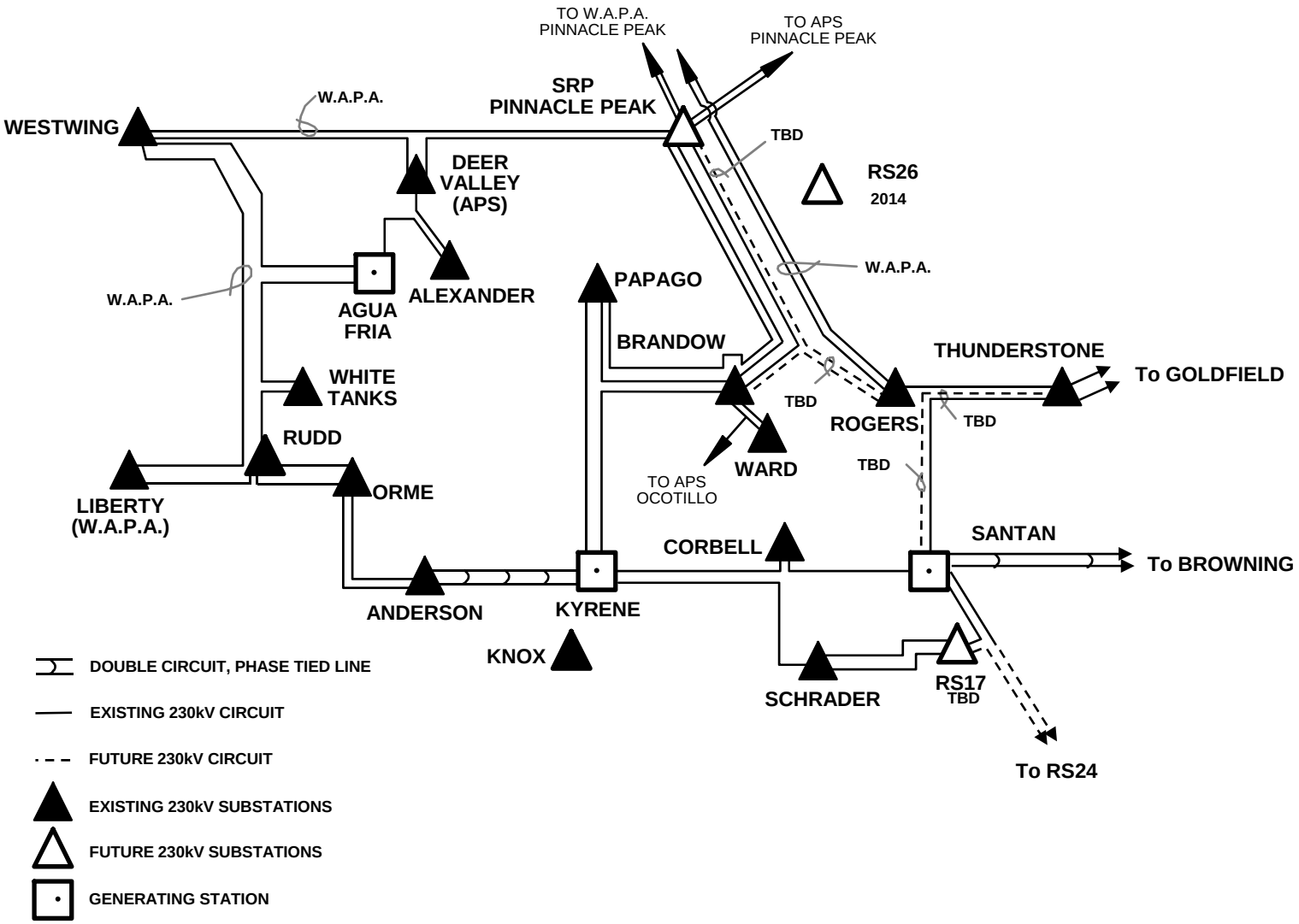
January 26, 2009

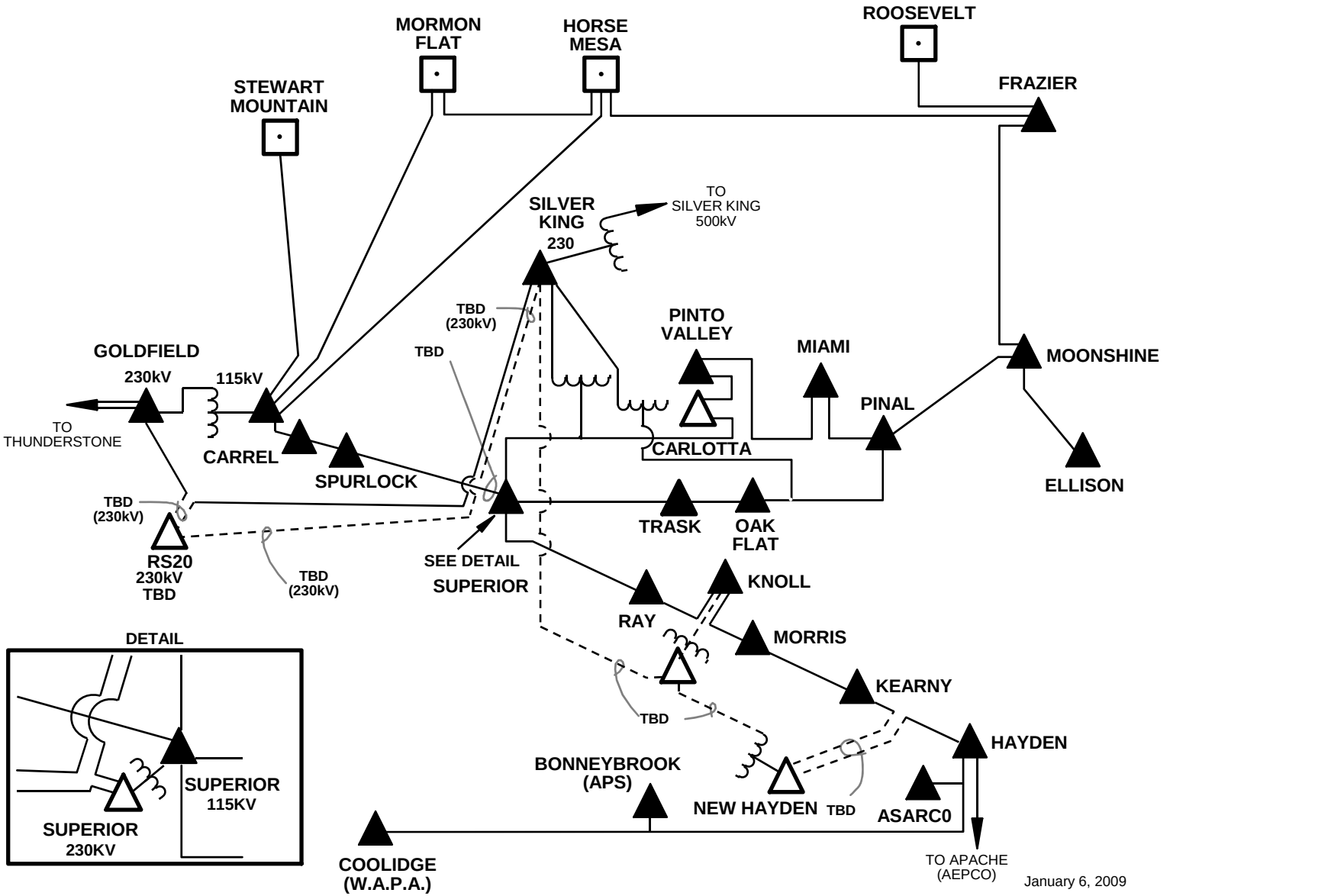


ATTACHMENT C

SALT RIVER PROJECT
WESTERN 230kV SYSTEM

January 6, 2009





January 6, 2009

SALT RIVER PROJECT
EASTERN MINING AREA SYSTEM

ATTACHMENT D

SALT RIVER PROJECT

SRP Valley Projects
APPENDIX 1

09-0125-01 01/09

2008 CAPITAL PROJECT DESCRIPTION

Budget Year 2013/2014

EHV Diagrams 115, 230 & 500kV
Area Switching Diagrams fountain2.pdf
Rec. Station Diagrams
Dist. Station Diagrams

Date: January 25, 2008 ***Location:*** Fountain/Rio Verde Area

Job Title: RS-26, New Receiving Station in the Fountain/Rio Verde area

Project Summary: Construct a new Fountain Area Receiving Station, RS-26, with 1-280MVA 345/69kV(or 230/69kV) transformer and connect it to 33E-25N 69kV substation by 5/2014.

Description of Work:

FOUNTAIN HILLS 345(230)KV RECEIVING STATION WORK

- Build two 345kV(230kV) buses with 6" EHPS AL tubing, bays 1-3.
- Install 3-345kV(230kV) 3000A breakers & 7-345kV(230kV) 3000A disconnects.
- Install 1-280MVA 345/69kV(230/69kV) transformer in the bay 2.

345kV(230kV) RECEIVING STATION SUBTOTAL $6,000,000

FOUNTAIN HILLS 69 KV RECEIVING STATION WORK

- Build two 69kV buses with 6" EHPS AL tubing, bays 1-3.
- Install 2-69kV 3000A, 44kA I.C. breakers & 4-69kV 3000A disconnects.
- Terminate 69kV line from 33E-25N into bay 2.

69KV RECEIVING STATION SUBTOTAL $670,000

33E-25N 69kV SUBSTATION WORK

- Install 1-69kV 2000A, 40kA I.C. breaker & 2-69kV 2000A disconnects.

33E-25N STATION SUBTOTAL $245,000

69KV LINE WORK

- Build 1-954ACSS 69kV line from the new receiving station to 33E-25N substation.
- The furthest location of the Receiving Station from 33E-25N is 8 miles.

69KV LINE MAX. SUBTOTAL $2,000,000

ESTIMATED TOTAL $8,915,000

In-Service Date: April 30, 2014

Rob Kondziolka 1/28/2008

_____ _____

Manager ***Date***

Load Growth Project, TSP Contact Jeff Loehr or Jose Silva (69kV)

Justification:

- During summer peak loading with all projects in, the voltage in the Fountain area falls below the minimum acceptable level at several 69kV stations for an Evergreen/Pima outage. A new receiving station and associated 69kV line work in the area will provide more long-term voltage support than the addition of capacitor banks.

2008 CAPITAL PROJECT DESCRIPTION

Budget Year 2013/2014

Date: January 25, 2008 ***Location:*** Fountain/Rio Verde Area

Job Title: New Receiving Station in the Fountain/Rio Verde area

Project Summary: Construct a new Fountain Area Receiving Station with 1-280MVA 345/69kV(or 230/69kV) transformer and connect it to 33E-25N 69kV substation by 5/2014.

	Voltage @ Evergreen & Wheeler for outage of Evergreen-Pima 69kV line			
	without the Fountain Hills Rec. station		**with the Fountain Hills Rec. station**	
Year	**2014**	**2015**	**2014**	**2015**
Evergreen	0.949pu	case diverges	0.993pu	0.988pu
Wheeler	0.950pu	case diverges	0.992pu	0.987pu

NOTE: The Fountain area has 25MVAr of caps added at 33E-25N in 2010.

2003, 2004 Project Summary: The project was removed from the six-year planning period with the addition of FT#3 switching station and 25MVAr cap bank at 33E-25N.

2002 Project Summary: Construct a new Fountain Area Receiving Station or a new 69kV line of unknown mileage and origin in the Fountain area by 05/08

2001 Project Summary: Construct a new Fountain Area Receiving Station or a new 69kV line of unknown mileage and origin in the Fountain area by 05/07.

Job Title: **RS-24 New 230kV Line and 230/69kV Station**

Project Summary: Construct the new RS-24 230/69kV station with one 280MVA 230/69kV transformer. Construct approximately 20 miles of new double circuit 230kV line from SEV to RS-24 to the RS-17 site. Split the parallel on the existing Santan - Schrader 230kV circuit to tie in the new 230kV lines from RS-24 to Santan and Schrader. Loop Hunt - Morcom and Egan - Rittenhouse 69kV lines into the new 69kV yard.

In-Service Date: April 30, 2012

Coordinate Location: NEAR 43E-12S AT A TO BE DETERMINED SITE

Load Growth Project

Contact(s): TSP: Tom Novy, Jeff Loehr

Approved By: REKONDZI January 28, 2008 (See Project Funding Priority List for Funding Status)

EHV Diagrams 115, 230 & 500: Valley 230kV
Area Switching Diagrams: Santan2
Rec. Station Diagrams: SEV 230kV, RS-24 230kV, Santan 230kV, Schrader 230kV
Dist. Station Diagrams: RS-24 69kV

Description of Work:

RS-24 Station Work — FY 11/12 CBI 350-6090 — $17,700,000
- Construct 1 - 230kV Substation (230kV bays 1 - 4, 69kV bays 1 - 12)
- Install 1 - 230/69kV Power Transformer (280MVA)
- Install 5 - 230kV Circuit Breaker (44kA i.c. - 3000A) Locations TBD
- Install 7 - 69kV Circuit Breaker (44kA i.c. - 3000A) Locations TBD

Santan 230kV Station Work — FY 11/12 CBI 350-3903 — $1,600,000
- Install 2 - 230kV Circuit Breaker (63kA i.c. - 3000A) ST702 and ST705
- Upgrade 1 - 230kV Circuit Breaker (63kA i.c. - 3000A) ST708
- Install 4 - 230kV Disconnect Switch (3000A) ST701, 703, 704, 706
- Upgrade 2 - 230kV Disconnect Switch (3000A) ST707, 709
- Install 1 - 230kV Line Relay for new line

Schrader 230kV Station Work — FY 11/12 CBI 350-3903 — $1,300,000
- Install 1 - 230kV Disconnect Switch (3000A) SCR629
- Install 1 - 230kV Line Relay for new line

SEV 230kV Station Work — FY 11/12 CBI 350-3903 — $2,000,000
- Install 2 - 230kV Circuit Breaker (63kA i.c. - 3000A)
- Install 4 - 230kV Disconnect Switch (3000A)

230kV Line Work — FY 11/12 CBI 350-6090 — $20,000,000
- Construct 20 miles of 230kV Transmission Line (double circuit 230kV with double circuit 69kV underbuild capable) from SEV to the RS-24 site to the existing Santan-Schrader 230kV line near the RS-17 site
- Reconfigure the existing Santan - Schrader 230kV line by removing the parallel to create two circuits, split one circuit with the new line
- Terminate 230kV Transmission Line from RS-24 into Santan Bay 0
- Terminate 230kV Transmission Line from RS-24 into Schrader Bay 2

69kV Line Work — FY 11/12 CBI 350-1074 — $2,500,000
- Construct 1 miles of 69kV 2-954ACSS Transmission Line - Double Circuit from RS-24 to the existing Hunt - Morcom line to loop that line into RS-24
- Construct 5 miles of 69kV Transmission Line Underbuild on 230kV Line from RS-24 to the existing Egan - Rittenhouse line to loop that line into RS-24
- Install 2 - 69kV Drop Pole (Steel) to accomodate drops into RS-24

69kV Right of Way — FY 11/12 CBI 350-1801 — $177,000
- 69kV ROW

Job Title: **RS-24 New 230kV Line and 230/69kV Station**

Description of Work: (cont.)

69kV Right of Way ➢ 69kV ROW (placeholder for budget)	FY 12/13 CBI 350-1801	$1,423,000
69kV Right of Way ➢ 69kV ROW (placeholder for budget)	FY 13/14 CBI 350-1801	$502,000
	FY 2011/2012	$45,277,000
	FY 2012/2013	$1,423,000
	FY 2013/2014	$502,000
	ESTIMATED TOTAL	$47,202,000

Justification:

- RS-24 230kV lines are required to accomodate projected new generation resource additions in the Pinal County area in the 2012-2013 timeframe.
- The addition of RS-24 delays the need for 230/69kV transformers at Browning and Dinosaur by several years
- The addition of RS-24 delays the need for multiple 69kV line upgrades or new 69kV lines
- RS-24 is part of the saturated load plan for 69kV service in the Queen Creek area. Constructing this project now will reduce the number of interests impacted by a new line in a rapidly developing area of the valley.
- The RS-24 project is scheduled to be sited in the 2008-2009 timeframe.

2007 Project Summary: This project was not identified in the 2007 Electric System Plan.

Job Title: **New 500kV line Pinal Central to Abel to RS20**

Project Summary: Construct a new 500kV line from the Pinal Central area to Abel to RS20. Construct required line termination equipment at Pinal Central and Abel and construct a new RS20 500kV station. Loop Silver King to Browning 500kV into RS20.

In-Service Date: April 30, 2020

Coordinate Location: PINAL COUNTY

Load Growth Project

Contact(s): TSP: Jeff Loehr or Chuck Russell

Approved By: Not yet approved (See Project Funding Priority List for Funding Status)

Description of Work:

ESTIMATED TOTAL $0

Justification:

- In approximately 2020, the outage of the first Pinal Central to Abel 500kV line will result in the loss of a significant portion of the SRP transmission capacity between Pinal Central and the SRP service territory. The loss of this capacity will reduce SRP's ability to schedule power from the Pinal Central area and the Palo Verde hub. By 2020 this total could exceed 1500MW, becoming SRP's largest single system hazard for loss of resources. As this outage also restricts the ability to purchase replacement power from the Palo Verde hub, the construction of a new line is the prefered solution to prevent the loss of generation resources.
- The need for this line is highly dependant on what generation in the resource plan is constructed. This line may need to be advanced if no or limited Abel generation is constructed. This line may also need to be advanced if significant new resources are connected at Pinal Central (SunZia).

2008 Project Summary: There is no old summary for this CPD

Note: This project is currently outside the SRP 6 year budgeting and 10 year planning process and is for visibility only.