ARIZONA PUBLIC SERVICE COMPANY
2008–2017
TEN-YEAR PLAN

Prepared for the

Arizona Corporation Commission

January 2008

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2008 - 2017
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CONTENTS

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GENERAL INFORMATION

Pursuant to A.R.S. § 40-360.02, Arizona Public Service Company ("APS") submits its 2008-2017 Ten-Year Plan. Additionally, pursuant to Arizona Corporation Commission ("Commission") Decision No. 63876 (July 25, 2001) concerning the first Biennial Transmission Assessment, APS is including with this filing its Transmission Planning Process and Guidelines and maps showing system ratings on APS' transmission system. The Transmission Planning Process and Guidelines outline generally APS' internal planning for its high voltage and extra-high voltage transmission system, including a discussion of APS' planning methodology, planning assumptions, and its guidelines for system performance. The system ratings maps show continuous and emergency system ratings on APS' extra-high voltage system, and on its Metro, Northern, and Southern 230kV systems.

This 2008–2017 Ten-Year Plan describes planned transmission lines of 115kV or higher voltage that APS may construct, or participate in, over the next ten-year period. Pursuant to A.R.S. § 40-360(10), underground facilities are not included. There are approximately 181 miles of 500kV transmission lines, 96 miles of 230kV transmission lines, and 19 bulk transformers contained in the projects in this Ten-Year Plan filing. The total investment for the APS projects and the anticipated APS portion of the participation projects as they are modeled in this filing is estimated to be approximately $900 Million and the projects will add an expected 2000 MW of additional EHV scheduling capability. Also, over the next ten years the import capability into the Phoenix area will increase by 3837 MW, while the import capability into the Yuma area will

increase by 272 MW. The following table shows a breakdown of the projects contained in this Ten-Year Plan.

	Projects in Ten-Year Plan
500kV transmission lines	181 miles
230kV transmission lines	96 miles
Bulk Transformers	19
Total Investment	$900 Million
EHV Scheduling Capability	+2000 MW (+28 %)[1]
Total Phoenix Area Import	+3837 MW (+28 %)[1]
Yuma Area Import	+272 MW (+65 %)[1]

[1.] Based on 2007 values.

Also, some of the previously reported facilities that have been completed, canceled, or deferred beyond the upcoming ten-year period are not included. The projects at the end of this Ten-Year Plan that have in-service dates of To Be Determined (TBD) are projects that have been identified, but are either still outside of the ten-year planning window or their in-service dates have not yet been established. They have been included in this filing for informational purposes. A summary of changes from last year's plan is provided below, along with a list of projects that have been added to this year's Ten-Year Plan. Also, a section is included that briefly describes any projects that are still in the feasibility planning phase.

For the convenience of the reader, APS has included system maps showing the electrical connections and in-service dates for all overhead transmission projects planned by APS for Arizona, the Phoenix Metropolitan Area, and the Yuma Area. Written descriptions of each proposed transmission project are provided on subsequent pages in the currently expected chronological order of each project. The line routings shown on the system maps and the descriptions of each transmission line are intended to be general, showing electrical connections and not specific routings, and are subject to revision. Specific routing is recommended by the Arizona Power Plant and Transmission Line Siting Committee and ultimately approved by the

Commission when issuing a Certificate of Environmental Compatibility and through subsequent right-of-way acquisition. Pursuant to A.R.S. § 40-360.02, this filing also includes technical study results for the projects identified. The technical study results show project needs which are generally based on either security (contingency performance), adequacy (generator interconnection or increasing transfer capability) or both.

APS participates in numerous regional planning organizations and in the WestConnect organization. Through membership and participation in these organizations the needs of multiple entities, and the region as a whole, can be identified and studied. This allows for the potential of maximizing the effectiveness and utilization of new projects. Regional organizations that APS is a member of include the Western Electricity Coordinating Council (WECC), the Southwest Area Transmission Planning (SWAT), and WestConnect which established a formal sub-regional transmission planning process during 2007. The plans included in this filing are the result of these coordinated planning efforts. APS is open to other entities participating in any existing or future planned projects.

APS believes that the projects identified in this 2008-2017 Ten-Year Plan, with their associated in-service dates, will ensure that APS' transmission system meets all applicable reliability criteria. Changes in regulatory requirements or underlying assumptions such as load forecasts, generation or transmission expansions, economic issues, and other utilities' plans, may substantially impact this Ten-Year Plan and could result in changes to anticipated in-service dates or project scopes. Additionally, future federal and regional mandates may impact this Ten-Year Plan specifically and the transmission planning process in general. This Ten-Year Plan is tentative information only and, pursuant to A.R.S. § 40-360.02(F), is subject to change without notice at the discretion of APS, based on land usage, growth pattern changes, regulatory or legal developments, or for other reasons.

Changes from 2007-2016 Ten-Year Plans

The following is a list of projects that were changed or removed from the Ten-Year plan filed last year, along with a brief description of why the change was made.

- Palo Verde – Sun Valley 500kV line & Sun Valley – TS9 500kV line

  The 2007-2016 Ten-Year Plan showed the TS5 500kV substation as one of the terminations of each of these lines. In the 2008-2017 Ten-Year Plan, the TS5 500kV substation has been renamed and referred to as the Sun Valley 500kV substation. Also, the last Ten-Year Plans showed the in-service date for Palo Verde-Sun Valley 500 kV & Sun Valley – TS1 230 kV projects as 2009. The latest planning studies show that the in-service date for the project can be delayed until 2010.

- TS9-Raceway-Avery-TS6-Pinnacle Peak 230 kV line

  The 2007-2016 Ten-Year Plans showed the in-service date for the proposed Raceway-Avery 230 kV line as 2009. Also, the 2007-2016 Ten-Year Plans showed the in-service date for the proposed Avery-TS6-Pinnacle Peak 230kV line as 2010. The latest planning studies show that the in-service date for the 230kV line between Raceway and Pinnacle Peak can be delayed until 2010, with the in-service date for the Avery substation being in 2013 and the in-service date for the TS6 substation being in 2012. Also, the in-service date for the 500/230kV transformer and 230kV line from TS9 to Raceway would be 2012.

- Sugarloaf loop-in of Coronado-Cholla 500 kV line

  The 2007-2016 Ten-Year plan has the Second Knoll loop-in of the 500 kV Coronado-Cholla line. In the 2008-2017 Ten year plan, Second Knoll substation has been renamed and referred to as the Sugarloaf substation.

- 345/69 kV Interconnection at Western's Flagstaff 345 kV bus

  The 2007-2016 Ten-Year Plans showed the in-service date for this interconnection as 2009. The latest planning studies show that the in-service date for the interconnection can be delayed until 2010.

- Jojoba loop-in of TS4-Panda 230 kV line.

The 2007-2016 Ten-Year Plans showed the in- service date for the proposed Jojoba loop-in of TS4- Panda 230 kV projects as 2011. The latest planning studies show that the in-service date for the project can be delayed until 2013.

- Sundance-Pinal South 230 kV line

  The 2007-2016 Ten-Year Plans showed a single circuit for the 230 kV Sundance-Pinal South line. The latest planning studies show that a second circuit between the two substations will allow APS to reliably and economically deliver energy to APS transmission system. The in-service date for the second circuit will be evaluated in future planning studies.

- Sun Valley – TS11 – Buckeye 230 kV line.

  The 2007-2016 Ten-year plans showed a 230 kV line between APS' Sun Valley and Buckeye substations. The 2008-2017 Ten-year plans show that a new TS11 substation will now be interconnected to the original 230 kV line.

New Projects in the 2008-2017 Ten-Year Plan

- Sun Valley-TS9 230 kV line.

  This project will be a 230 kV line built between future APS' future Sun Valley and TS9 substation. This 230 kV line originates from the Sun Valley 500/230 kV

substation and is proposed to be the 230 kV portion of a double circuit with the Sun Valley- TS9 500 kV line. The timing of this project is to be determined.

- North Gila- Yucca 230 kV line

  This project will be a 230 kV line between APS' North Gila and Yucca Substations. The timing of this project is still to be determined.

- Sun Valley-TS10-TS11 230 kV line

  This project will be a 230 kV line from APS' Sun Valley substation to TS11 substation, with the future TS10 substation to be interconnected to the line. The timing of this project is still to be determined.

Conceptual Projects in the Feasibility Planning Phase

The following projects, described below for informational purposes, are still in a preliminary planning phase, and are dependent on future resource alternative selection.

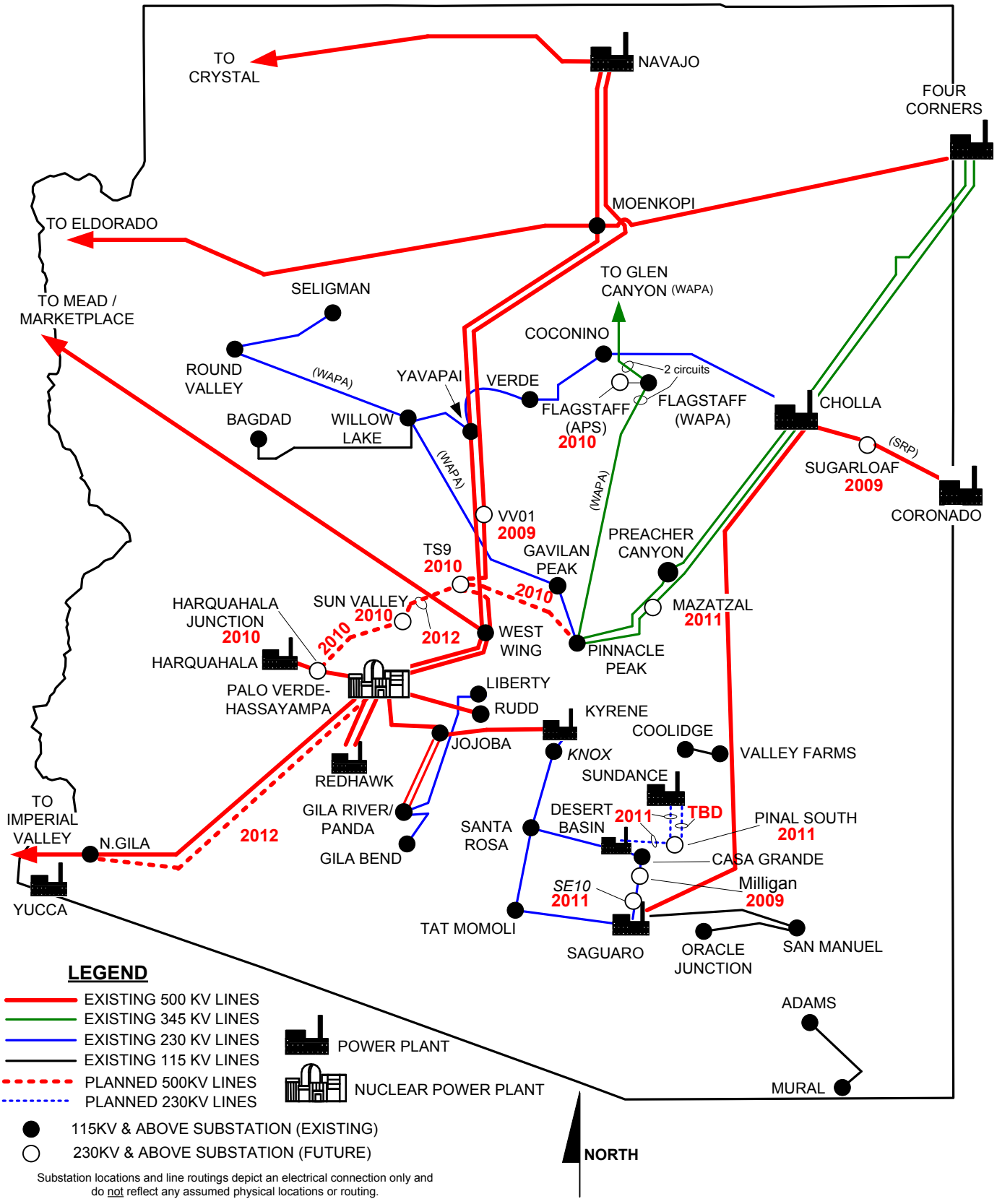
- TransWest Express Project

  In August 2007, APS entered into an agreement with PacifiCorp, National Grid and the Wyoming Infrastructure Authority to co-develop the TransWest Express project and PacifiCorp's recently announced Gateway South Transmission project. The Trans West Express Project involves construction of a 500 kV DC transmission line from Wyoming to Arizona with a capacity of 3000 MW. This project provides multiple benefits, which include the ability to meet the growing demand for electricity, improved reliability of the entire western grid, expanded access to renewable energy resources, lower environmental impact through combined use of transmission corridors and greater economies of scale. The proposed in-service date for this project is 2015.

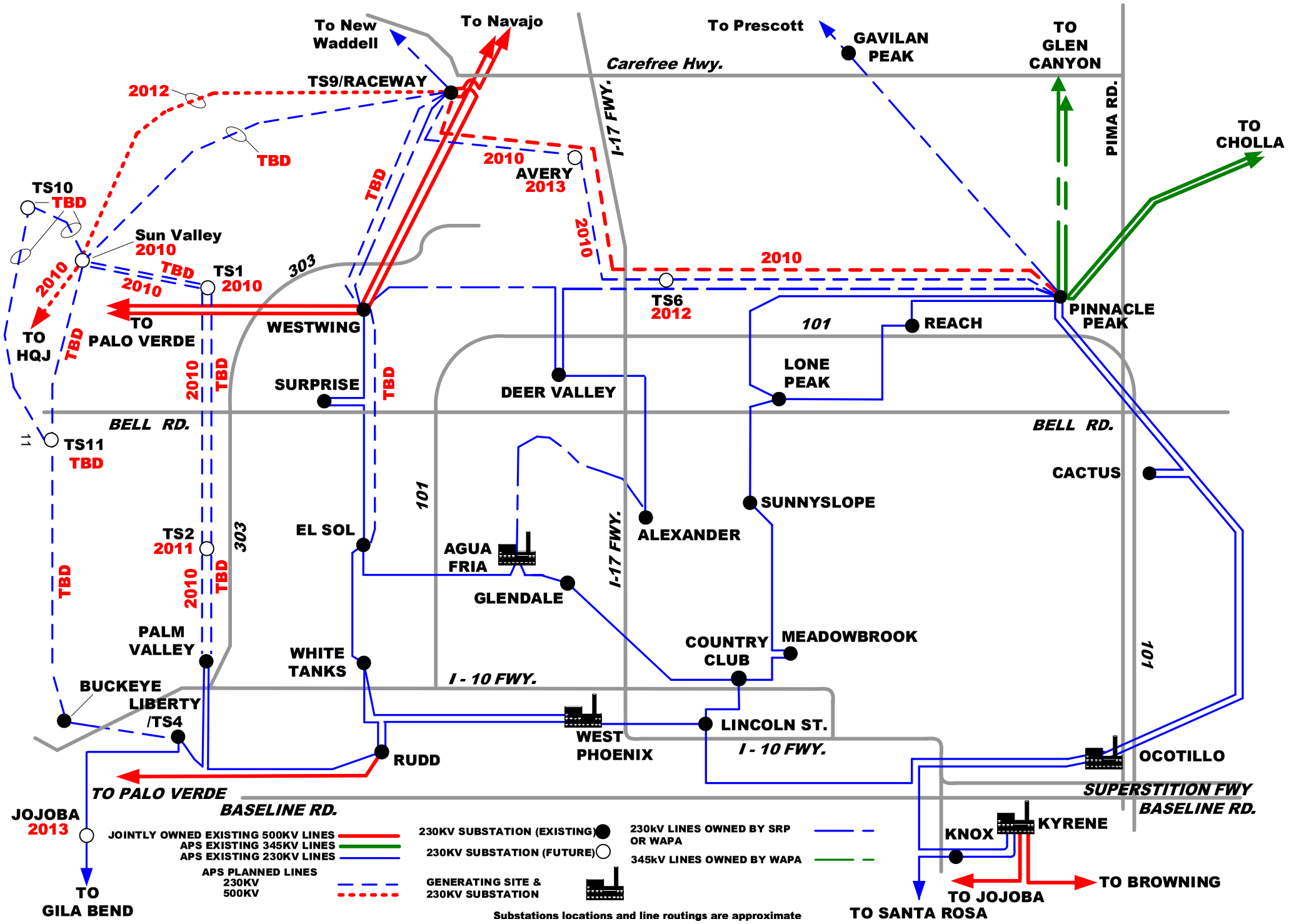
- Cholla – Phoenix Metropolitan Area 500kV line

This project will be a 500kV line that will be built between APS' Cholla 500kV substation and the Phoenix Metropolitan area and is being studied as a means to provide access to Cholla area resources for APS. The scope and timing for this project is still under study.

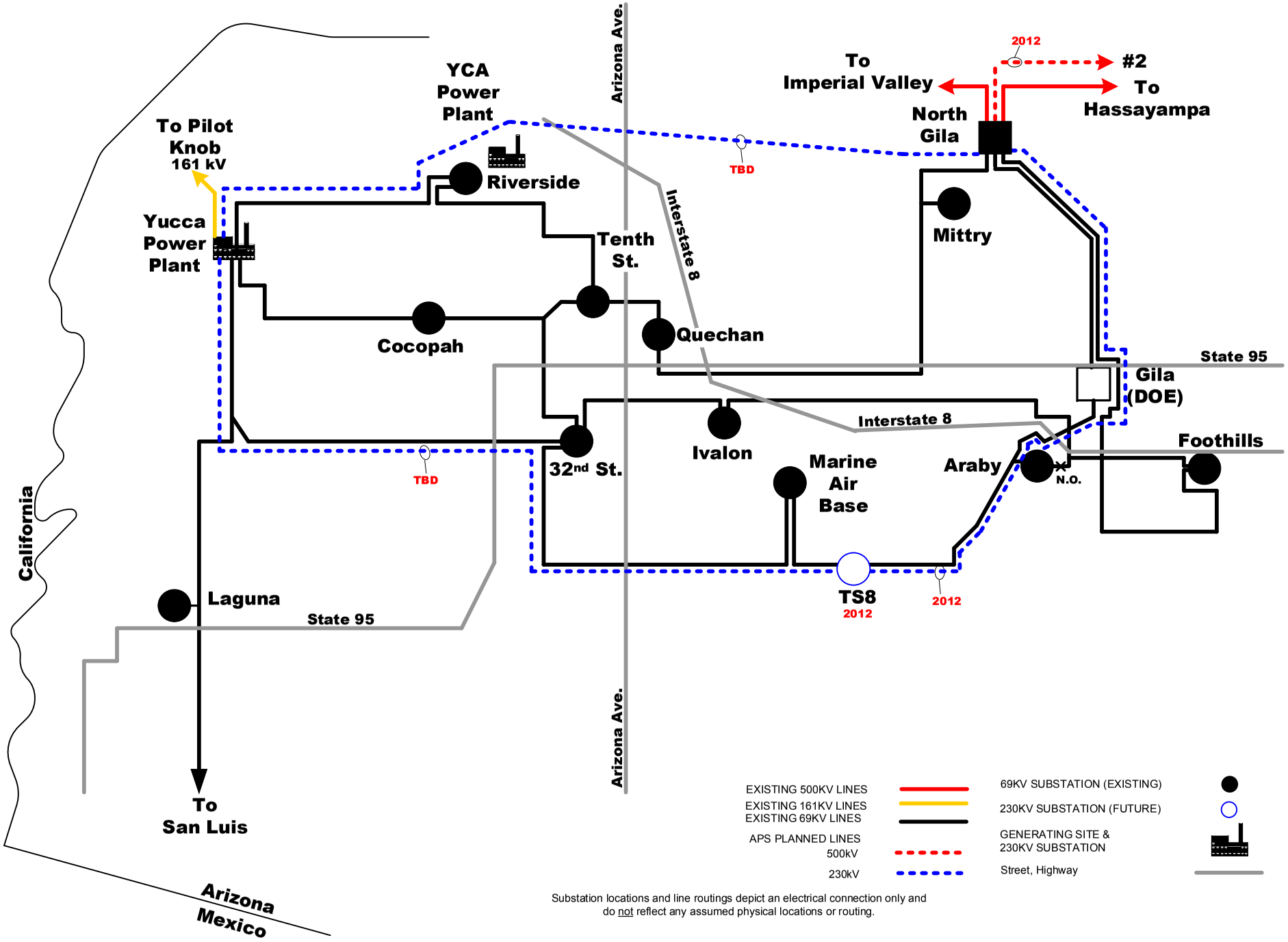
APS EHV & OUTER DIVISION 115/230 KV TRANSMISSION PLANS 2008 - 2017



PHOENIX METROPOLITAN AREA TRANSMISSION PLANS 2008-2017



Yuma Area Transmission Plans 2008- 2017



Substation locations and line routings depict an electrical connection only and do not reflect any assumed physical locations or routing.

Project Name: Sugarloaf loop-in of Coronado - Cholla 500kV line

Planned In-Service Date: 2009

Project Sponsor: Arizona Public Service

Other Participants: SRP

Voltage Class: 525kV AC

Facility Rating: 240 MVA

Point of Origin: Coronado - Cholla 500kV line; Sec. 9, T14N, R21E

Point of Termination: Sugarloaf 500/69kV substation to be in-service in 2009; Sec. 9, T14N, R21E

Intermediate Points of Interconnection:

Length of Line (in miles): Less than 1 mile

General Route:

The Sugarloaf substation will be constructed adjacent to the existing Coronado-Cholla 500kV line.

Purpose of Project:

This project is needed to provide the electrical source and support to the sub-transmission system to serve the increasing need for electric energy in Show Low and the surrounding communities. The project will improve reliability and continuity of service for the growing communities in the area. The Sugarloaf substation will interconnect into SRP's Coronado-Cholla 500kV line, therefore SRP will construct, own, and operate the new Sugarloaf 500kV substation.

Schedule:

Construction Start: 2008

In-Service Date: 2009

Permitting / Siting Status:

It is not anticipated that a Certificate of Environmental Compatibility will be needed for this project.

Project Name: Milligan loop-in of Saguaro-Casa Grande 230kV line

Planned In-Service Date: 2009

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: 188 MVA

Point of Origin: Saguaro-Casa Grande 230kV line; Sec. 18, T8S, R8E

Point of Termination: Milligan substation to be in-service by 2009; Sec. 18, T8S, R8E

Intermediate Points of Interconnection:

Length of Line (in miles): Less than 1 mile

General Route:

The Milligan 230/69kV substation will be constructed adjacent to the Saguaro-Casa Grande 230kV line.

Purpose of Project:

This project is needed to provide the electrical source and support to the sub-transmission system to serve the increasing need for electric energy in southern Pinal County, in the Eloy area. The project will also increase the reliability and continuity of service for those areas.

Schedule:

Construction Start: 2008

In-Service Date: 2009

Permitting / Siting Status:

It is not anticipated that a Certificate of Environmental Compatibility will be needed for this project.

Project Name: VV01 loop-in of Navajo - Westwing 500kV line

Planned In-Service Date: 2009

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 525kV AC

Facility Rating: 240 MVA

Point of Origin: Navajo-Westwing 500kV line; approximately Sec. 24, T12N, R2E

Point of Termination: VV01 substation to be in-service by 2009; approximately Sec. 24, T12N, R2E

Intermediate Points of Interconnection:

Length of Line (in miles): Less than 1 mile

General Route:

The VV01 substation will be constructed adjacent to the Navajo-Westwing line.

Purpose of Project:

This project is needed to provide the electrical source and support to the sub-transmission system to serve the increasing electrical needs in the Verde Valley and Prescott areas. Also, the project will result in increased reliability and continuity of service for the Verde Valley and Prescott areas.

Schedule:

Construction Start: 2008

In-Service Date: 2009

Permitting / Siting Status:

It is not anticipated that a Certificate of Environmental Compatibility will be needed for this project.

Project Name: 345/69kV Interconnection at Western's Flagstaff 345kV bus

Planned In-Service Date: 2010

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 345kV AC

Facility Rating: 200 MVA

Point of Origin: Western's Flagstaff 345kV substation; Sec. 24, T21N, R9E

Point of Termination: A new Flagstaff 69kV substation to be in-service by 2010; Sec. 24, T21N, R9E

Intermediate Points of Interconnection:

Length of Line (in miles): Less than 1 mile

General Route:

A 345/69kV transformer will interconnect into Western's Flagstaff substation.

Purpose of Project:

This project is needed to provide the electrical source and support to the sub-transmission system to serve the increasing need for electric energy in APS's northern service area. The project will also improve reliability and continuity of service for the growing communities in northern Arizona.

Schedule:

Construction Start: 2009

In-Service Date: 2010

Permitting / Siting Status:

It is not anticipated that a Certificate of Environmental Compatibility will be needed for this project.

Project Name: Palo Verde Hub - Sun Valley 500kV line

Planned In-Service Date: 2010

Project Sponsor: Arizona Public Service

Other Participants: SRP, CAWCD

Voltage Class: 525kV AC

Facility Rating: To be determined

Point of Origin: Palo Verde Switchyard or a new switchyard at Arlington Valley Energy Facility.

Point of Termination: Sun Valley substation to be in-service by 2010; Sec. 29, T4N, R4W

Intermediate Points of Interconnection: Proposed Harquahala Junction substation; approximately Sec. 25, T2N, R8W

Length of Line (in miles): Approximately 45 miles

General Route:

Generally leaving the Palo Verde Hub vicinity following the Palo Verde-Devers #1 and the Hassayampa-Harquahala 500kV lines until crossing the CAP canal. Then easterly, generally following the CAP canal, on the north side of the canal to the new Sun Valley substation.

Purpose of Project:

This project is needed to serve projected need for electric energy in the area immediately north and west of the Phoenix Metropolitan area. It will increase the import capability to the Phoenix Metropolitan area as well as increase the export capability from the Palo Verde hub. This is a joint participation project with APS as the project manager. The initial plan of service for the project will be a 500kV line between the Harquahala Junction switchyard and the Sun Valley substation. The need for the 500kV line portion between the Harquahala Junction switchyard and the Palo Verde (or Arlington) switchyard will be continuously evaluated in future studies. The Harquahala Junction switchyard will interconnect into the existing Hassayampa-Harquahala 500kV line.

Schedule:

Construction Start: 2008

In-Service Date: 2010

Permitting / Siting Status:

Certificate of Environmental Compatibility issued 8/17/05 (Case No. 128, Decision No. 68063, Palo Verde Hub to TS5 500kV Transmission project). APS, as project manager, holds the CEC.

Project Name: Sun Valley - TS1 230kV line

Planned In-Service Date: 2010

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: 3000 A

Point of Origin: Sun Valley substation to be in-service by 2010; Sec. 29, T4N, R4W

Point of Termination: TS1 substation to be in-service by 2010; Sec. 20, T4N, R2W

Intermediate Points of Interconnection:

Length of Line (in miles): Approximately 15 miles

General Route:

East from the Sun Valley substation along the CAP canal to approximately 243rd Ave., south to the existing 500kV transmission line corridor, and then east along the corridor to the TS1 substation.

Purpose of Project:

This project is required to serve the increasing need for electric energy in the western Phoenix Metropolitan area. Also, the project will provide more capability to import power into the Phoenix Metropolitan area along with improved reliability and continuity of service for growing communities in the area; such as El Mirage, Surprise, Youngtown, Buckeye, and unincorporated Maricopa county. The first circuit is scheduled to be in-service for the summer of 2009 and the in-service date for the second circuit will be evaluated in future planning studies.

Schedule:

Construction Start: 2008

In-Service Date: 2010

Permitting / Siting Status:

Certificate of Environmental Compatibility issued 5/5/05 (Case No. 127, Decision No. 67828, West Valley North 230kV Transmission Line project).

Project Name: Palm Valley - TS2 - TS1 230kV line

Planned In-Service Date: 2010

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: 3000 A

Point of Origin: Palm Valley substation; Sec. 24, T2N, R2W

Point of Termination: TS1 substation to be in-service by 2010; Sec. 20, T4N, R2W

Intermediate Points of Interconnection: TS2 substation to be in-service by 2011; Sec. 25, T3N, R2W

Length of Line (in miles): Approximately 12 miles

General Route:

North from the Palm Valley substation, generally following the Loop 303 to Cactus road, west on Cactus road to approximately 191st Avenue, and then north on 191st Avenue to the TS1 substation. The future TS2 substation is currently projected to be in-service in 2011.

Purpose of Project:

This project is required to serve the increasing need for electric energy in the western Phoenix Metropolitan area, providing more capability to import power into the Phoenix Metropolitan area along with improved reliability and continuity of service for growing communities in the area; such as El Mirage, Surprise, Youngtown, Goodyear, and Buckeye. The first circuit is scheduled to be in-service for the summer of 2010 and the in-service date for the second circuit will be evaluated in future planning studies.

Schedule:

Construction Start: 2008

In-Service Date: 2010

Permitting / Siting Status:

The Palm Valley-TS2 230kV line portion was sited as part of the West Valley South 230kV Transmission Line project and a Certificate of Environmental Compatibility was issued 12/24/03 (Case No. 122, Decision No. 66646). The TS1-TS2 230kV line portion was sited as part of the West Valley North 230kV Transmission Line project and a Certificate of Environmental Compatibility was issued 5/5/05 (Case No. 127, Decision No. 67828).

Project Name: TS9 - Pinnacle Peak 500kV line

Planned In-Service Date: 2010

Project Sponsor: Arizona Public Service

Other Participants: SRP

Voltage Class: 525kV AC

Facility Rating: To be determined

Point of Origin: TS9 substation to be in-service by 2010; Sec. 33, T6N, R1E

Point of Termination: Pinnacle Peak substation; Sec. 10, T4N, R4E

Intermediate Points of Interconnection:

Length of Line (in miles): Approximately 26 miles

General Route:

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 of Project:

This project is a result of joint planning through the SWAT forum. The project is needed to increase the import capability to the Phoenix Metropolitan area and strengthen the transmission system on the east side of the Phoenix Metropolitan valley. This is anticipated to be a joint participation project with APS as the project manager. The loop-in of the Navajo-Westwing 500kV line into the TS9 substation will be a part of the project. Also, the line will be constructed as 500/230kV double-circuit capable, with the TS9-Raceway-Avery-TS6-Pinnacle Peak 230kV line as the 230kV circuit.

Schedule:

Construction Start: 2008

In-Service Date: 2010

Permitting / Siting Status:

Certificate of Environmental Compatibility issued on 2/13/07 (Case No. 131, Decision No. 69343, TS9-Pinnacle Peak 500/230kV Project).

Project Name: TS9 - Raceway - Avery - TS6 - Pinnacle Peak 230kV line

Planned In-Service Date: 2010

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: 3000 A

Point of Origin: TS9 230kV substation to be in-service by 2012; Sec. 33, T6N, R1E

Point of Termination: Pinnacle Peak substation; Sec. 10, T4N, R4E

Intermediate Points of Interconnection:
Raceway substation; Sec. 4, T5N, R1E
Avery substation to be in-service by 2013; Sec. 15, T5N, R2E
TS6 substation to be in-service by 2012; Sec. 8, T4N, R3E

Length of Line (in miles): Approximately 27 miles

General Route:

South from the TS9 substation to the existing Raceway substation, then south from Raceway approximately 1 mile, paralleling existing transmission lines. Then east approximately 9 miles, paralleling Dove Valley Road to the location of the future Avery substation. From Avery the line will continue east along Dove Valley Road to Interstate 17. At Interstate 17 the route will head south 5 miles, generally paralleling the west side of Interstate 17 until Happy Valley Road. The line will turn east, generally parallel to the existing 230kV transmission line corridor, for approximately 10 miles to the existing Pinnacle Peak substation.

Purpose of Project:

This project is needed to serve the increasing need for electric energy in the area immediately north of the Phoenix Metropolitan area and the northern portions of the Phoenix Metropolitan area. Additionally, improved reliability and continuity of service will result for the growing communities in the area; such as Anthem, Desert Hills, New River, and north Phoenix. The in-service date for the 500/230kV transformer at TS9 is currently scheduled for 2012. The in-service dates for the Avery and TS6 substations are currently scheduled for 2013 and 2012, respectively. The in-service dates for the substations and 500/230kV transformer at TS9 will be continuously evaluated in future planning studies.

Schedule:

Construction Start: 2008

In-Service Date: 2010

Permitting / Siting Status:

Certificate of Environmental Compatibility was issued2/13/07 (Case No. 131, Decision No. 69343, TS9-Pinnacle Peak 500/230kV Project).

Project Name: Mazatzal loop-in of Cholla-Pinnacle Peak 345kV line

Planned In-Service Date: 2011

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 345kV AC

Facility Rating: 200 MVA

Point of Origin: Cholla-Pinnacle Peak or Preacher Canyon-Pinnacle Peak 345kV line; near Sec. 3, T8N, R10E

Point of Termination: Mazatzal substation to be in-service by 2011; Sec. 3, T8N, R10E

Intermediate Points of Interconnection:

Length of Line (in miles): Less than 1 mile

General Route:

The Mazatzal 345/69kV substation will be constructed adjacent to the Cholla-Pinnacle Peak 345kV line corridor.

Purpose of Project:

This project is needed to provided the electric source and support to the sub-transmission system to serve the increasing need for electric energy in the area of Payson and the surrounding communities. Additionally, improved reliability and continuity of service will result for the growing communities in the Payson area.

Schedule:

Construction Start: 2010

In-Service Date: 2011

Permitting / Siting Status:

It is not anticipated that a Certificate of Environmental Compatibility will be needed for this project.

Project Name: SE10 loop-in of Saguaro-Casa Grande 230kV line

Planned In-Service Date: 2011

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: 188 MVA

Point of Origin: Saguaro-Casa Grande 230kV line; approximately Sec. 17, T10S, R10E

Point of Termination: SE10 substation to be in-service by 2011; Sec. 17, T10S, R10E

Intermediate Points of Interconnection:

Length of Line (in miles): Less than 1 mile

General Route:

The SE10 230/69kV substation will be constructed adjacent to the Saguaro-Casa Grande 230kV line. Approximately 2 miles west of the Saguaro Generating Facility.

Purpose of Project:

This project is needed to provide the electrical source and support to the sub-transmission system to serve the increasing need for electric energy in southern Pinal County. The project will also increase the reliability and continuity of service for those areas.

Schedule:

Construction Start: 2010

In-Service Date: 2011

Permitting / Siting Status:

It is not anticipated that a Certificate of Environmental Compatibility will be needed for this project.

Project Name: Desert Basin - Pinal South 230kV line

Planned In-Service Date: 2011

Project Sponsor: Salt River Project

Other Participants: Arizona Public Service

Voltage Class: 230kV AC

Facility Rating: To be determined

Point of Origin: Desert Basin Power Plant Switchyard; Sec. 13, T6S, R5E

Point of Termination: Pinal South substation to be in-service by 2011; Sec. 30, T6S, R8E

Intermediate Points of Interconnection:

Length of Line (in miles): Approximately 21 miles

General Route:

From the Desert Basin Generation Station, in Casa Grande near Burris and Kortsen Roads, approximately 6 miles 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 South Substation south of Coolidge, AZ.

Purpose of Project:

The project will improve the reliability of the 230kV system in the region by reducing the loading on existing lines in the area; increase local area system capacity; create one of the 230kV components of the CATS-HV proposed transmission system for the central Arizona area. Also, APS participation in the project, along with APS's Sundance-Pinal South 230kV line, will allow APS to increase the reliability to deliver the output of the Sundance Generation Facility.

Schedule:

Construction Start: 2009

In-Service Date: 2011

Permitting / Siting Status:

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 No. 68093 and No. 68291), and subsequently confirmed in Decision No. 69183, which approved SRP's compliance filing for Condition 23 of the CEC. SRP was granted a CEC for Case No. 132 in 2007 (ACC Decision No. 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.

Project Name: Sundance - Pinal South 230kV line

Planned In-Service Date: 2011

Project Sponsor: Arizona Public Service

Other Participants: ED-2

Voltage Class: 230kV AC

Facility Rating: 3000 A

Point of Origin: Sundance substation; Sec. 2, T6S, R7E

Point of Termination: Pinal South substation to be in-service by 2011; Sec. 30, T6S, R8E

Intermediate Points of Interconnection:

Length of Line (in miles): Approximately 6 miles

General Route:

The route has not yet been approved by the ACC, but will generally head south from the Sundance facility to to a point south of State Route 287/Florence Boulevard and then head east into the Pinal South substation.

Purpose of Project:

This project will serve increasing loads in Pinal County and will improve reliability and continuity of service for the rapidly growing communities in the area. Also, the project will increase the reliability of the Sundance Generation facility by providing a transmission line in a separate corridor than the existing lines that exit the plant. This project, in conjunction with the Desert Basin-Pinal South 230kV project, will allow APS to reliably and economically deliver energy from the Sundance Generation facility over APS's transmission system. The project will be constructed as a 230kV double-circuit capable line, but initially operated as a single-circuit. The in-service date for the second circuit will be evaluated in future planning studies.

Schedule:

Construction Start: 2009

In-Service Date: 2011

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility was filed in December, 2007 (Case No. 136). A decision from the ACC is expected in 2008.

Project Name: Sun Valley - TS9 500kV line

Planned In-Service Date: 2012

Project Sponsor: Arizona Public Service

Other Participants: SRP, CAWCD

Voltage Class: 525kV AC

Facility Rating: To be determined

Point of Origin: Sun Valley substation to be in-service in 2009; Sec. 29, T4N, R4W

Point of Termination: TS9 substation to be in-service in 2010; Sec. 33, T6N, R1E

Intermediate Points of Interconnection:

Length of Line (in miles): To be determined

General Route:

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 of Project:

This project is needed to serve the increasing need for electric energy in the Phoenix Metropolitan area. It will increase the import capability to the Phoenix Metropolitan area, as well as increase the export capability from the Palo Verde hub. The line will also increase the reliability of the EHV system by completing a 500kV loop that connects the Palo Verde Transmission system, the Southern Navajo Transmission system, and the Southern Four Corners system. This project is anticipated to be 500/230kV double-circuit capable. It is anticipated that the project will be constructed as 500/230kV double-circuit capable.

Schedule:

Construction Start: 2010

In-Service Date: 2012

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility has not yet been filed. An application is expected to be filed in the second quarter of 2008.

Project Name: Palo Verde Hub - North Gila 500kV #2 line

Planned In-Service Date: 2012

Project Sponsor: Arizona Public Service

Other Participants: SRP, IID, WMIDD

Voltage Class: 525kV AC

Facility Rating: To be determined

Point of Origin: Hassayampa switchyard, Arlington Valley Power Plant, or Redhawk Power Plant

Point of Termination: North Gila substation; Sec. 11, T8S, R22W

Intermediate Points of Interconnection:

Length of Line (in miles): Approximately 110 miles

General Route:

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

Purpose of Project:

As a new transmission path to the Yuma area, this 500kV line will provide transmission capacity required to supplement limited transmission and generation resources in the Yuma area. This is a joint participation project with APS as the project manager.

Schedule:

Construction Start: 2009

In-Service Date: 2012

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility was filed 10/3/07 (Case No. 135). The CEC application was approved by the Arizona Power Plant and Transmission Line Siting Committee on November 20th. A final vote by the Arizona Corporation Commission is expected to take place in early 2008.

Project Name: North Gila - TS8 230kV line

Planned In-Service Date: 2012

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: 3000 A

Point of Origin: North Gila substation; Sec. 11, T8S, R22W

Point of Termination: TS8 substation to be in-service by 2012; Sec. 25, T9S, R23W

Intermediate Points of Interconnection:

Length of Line (in miles): Approximately 15 miles

General Route:

The routing for this line has not yet been determined.

Purpose of Project:

This project is needed to serve the increasing need for electric energy in the city of Yuma. Additionally, improved reliability and continuity of service will result for the fast growing Yuma County.

Schedule:

Construction Start: 2010

In-Service Date: 2012

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility has not yet been filed. An application is expected to be filed in 2008.

Project Name: Jojoba loop-in of TS4-Panda 230kV line

Planned In-Service Date: 2013

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: 188 MVA

Point of Origin: TS4-Panda 230kV line; Sec. 25, T2S, R4W

Point of Termination: Jojoba 230/69 substation to be in-service by 2013; Sec. 25, T2S, R4W

Intermediate Points of Interconnection:

Length of Line (in miles): Less than 1 mile

General Route:

The Jojoba 230/69kV substation will be constructed adjacent to the TS4-Panda 230kV line.

Purpose of Project:

This project is needed to provide the electrical source and support to the sub-transmission system to serve the increasing need for electric energy for the growing communities in the area; such as Buckeye, Goodyear, and Gila Bend. The project will also increase the reliability and continuity of service for those areas.

Schedule:

Construction Start: 2012

In-Service Date: 2013

Permitting / Siting Status:

Certificate of Environmental Compatibility issued 10/16/00 (Case No. 102, Decision No. 62960, Gila River Transmission Project) for the Gila River Transmission Project included the interconnection of the 230kV substation.

Project Name: Sun Valley - TS11 - Buckeye 230kV line

Planned In-Service Date: To be determined

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: To be determined

Point of Origin: Sun Valley substation to be in-service by 2010; Sec. 29, T4N, R4W

Point of Termination: Buckeye substation; Sec. 7, T1N, R3W

Intermediate Points of Interconnection: TS11 substation; location to be determined

Length of Line (in miles): To be determined

General Route:

The routing for this line has not yet been determined.

Purpose of Project:

This project is needed to serve the increasing need for electric energy in the largely undeveloped areas west of the White Tank Mountains. This project will provide the first portion of the transmission infrastructure in this largely undeveloped area and provides a transmission connection between the northern and southern transmission sources that will serve the area. Improved reliability and continuity of service will result for this fast growing portion of Maricopa County. It is anticipated that this project will be constructed with double-circuit capability, but initially operated as a single circuit. The in-service date and location of the TS11 230/69kV substation will be determined in future planning studies based upon the development of the area.

Schedule:

Construction Start: TBD

In-Service Date: TBD

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility has not yet been filed.

Project Name: **Sun Valley - TS10 - TS11 230kV line**

Planned In-Service Date: **To be determined**

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: To be determined

Point of Origin: Sun Valley substation to be in-service by 2010; Sec. 29, T4N, R4W

Point of Termination: A future TS10 substation; location to be determined

Intermediate Points of Interconnection: A future TS11 substation; location to be determined

Length of Line (in miles): To be determined

General Route:

The route for this project has not yet been determined.

Purpose of Project:

This project will be needed to provide a transmission source to serve future load that emerges in the currently undeveloped areas northwest of the White Tank Mountains. This line is anticipated to be a 230kV line emanating from the Sun Valley substation, with the future TS10 230/69kV substation to be interconnected into the 230kV line.

Schedule:

Construction Start: TBD

In-Service Date: TBD

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility has not yet been filed.

Project Name: Sun Valley - TS9 230kV line

Planned In-Service Date: To be determined

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: To be determined

Point of Origin: Sun Valley substation to be in-service in 2010; Sec. 29, T4N, R4W

Point of Termination: TS9 substation to be in-service in 2010; Sec. 33, T6N, R1E

Intermediate Points of Interconnection: To be determined

Length of Line (in miles): To be determined

General Route:

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 of Project:

This project will be needed to provide a transmission source to serve future load that emerges in the currently undeveloped areas south and west of Lake Pleasant. This line is anticipated to be the 230kV circuit on the Sun Valley-TS9 500/230kV double-circuit line.

Schedule:

Construction Start: TBD

In-Service Date: TBD

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility has not yet been filed. An application is expected to be filed in the second quarter of 2008.

Project Name: North Gila - Yucca 230kV line

Planned In-Service Date: To be determined

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: To be determined

Point of Origin: North Gila substation; Sec. 11, T8S, R22W

Point of Termination: Yucca substation; Sec. 36, T7S, R24W

Intermediate Points of Interconnection:

Length of Line (in miles): To be determined

General Route:

The routing for this line has not yet been determined.

Purpose of Project:

This project is needed to serve the increasing need for electric energy in the city of Yuma. Additionally, improved reliability and continuity of service will result for the fast growing Yuma County.

Schedule:

Construction Start: TBD

In-Service Date: TBD

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility has not yet been filed.

Project Name: **Yucca - TS8 230kV line**

Planned In-Service Date: **To be determined**

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: To be determined

Point of Origin: Yucca substation; Sec. 36 , T7S, R24W

Point of Termination: TS8 substation to be in-service in 2012; Sec. 25, T9S, R23W

Intermediate Points of Interconnection:

Length of Line (in miles): To be determined

General Route:

The routing for this line has not yet been determined.

Purpose of Project:

This project is needed to serve the increasing need for electric energy in the city of Yuma. Additionally, improved reliability and continuity of service will result for the fast growing Yuma County.

Schedule:

Construction Start: TBD

In-Service Date: TBD

Permitting / Siting Status:

An application for a Certificate of Environmental Compatibility has not yet been filed.

Project Name: Westwing - El Sol 230kV line

Planned In-Service Date: To be determined

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: To be determined

Point of Origin: Westwing substation; Sec. 12, T4N, R1W

Point of Termination: El Sol substation; Sec. 30, T3N, R1E

Intermediate Points of Interconnection:

Length of Line (in miles): Approximately 11 miles

General Route:

Per certificate. Generally following the existing Westwing-Surprise-El Sol 230kV corridor.

Purpose of Project:

This project will increase system capacity to serve growing demand for electric energy in the Phoenix Metropolitan area, while maintaining system reliability and integrity for delivery of bulk power from Westwing south into the APS Phoenix Metropolitan area 230kV transmission system.

Schedule:

Construction Start: TBD

In-Service Date: TBD

Permitting / Siting Status:

Certificate of Environmental Compatibility issued 7/26/73 (Case No. 9, Docket No. U-1345). Note that this Certificate authorizes two double-circuit lines. Construction of the first double-circuit line was completed in March 1975. Construction of the second line, planned to be built with double-circuit capability, but initially operated with a single circuit, is described above.

Project Name: Westwing - Raceway 230kV line

Planned In-Service Date: To be determined

Project Sponsor: Arizona Public Service

Other Participants: None

Voltage Class: 230kV AC

Facility Rating: To be determined

Point of Origin: Westwing substation; Sec. 12, T4N, R1W

Point of Termination: Raceway substation; Sec. 4, T5N, R1E

Intermediate Points of Interconnection:

Length of Line (in miles): Approximately 7 miles

General Route:

Northeast from Westwing substation paralleling existing transmission lines to the Raceway 230kV substation.

Purpose of Project:

This project will serve increasing loads in the far north and northwest parts of the Phoenix Metropolitan area and provide contingency support for multiple Westwing 500/230kV transformer outages. The in-service date will continue to be evaluated in future planning studies.

Schedule:

Construction Start: TBD

In-Service Date: TBD

Permitting / Siting Status:

Certificate of Environmental Compatibility issued 6/18/03 (Case No. 120, Decision No. 64473, North Valley 230kV Transmission Line Project).

Project Name: Palo Verde - Saguaro 500kV line

Planned In-Service Date: To be determined

Project Sponsor: CATS Sub-Regional Planning Group Participants

Other Participants: To be determined

Voltage Class: 525kV AC

Facility Rating: To be determined

Point of Origin: Palo Verde switchyard; Sec. 34, T1N, R6W

Point of Termination: Saguaro substation; Sec. 14, T10S, R10E

Intermediate Points of Interconnection: To be determined

Length of Line (in miles): Approximately 130 miles

General Route:

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 of Project:

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.

Schedule:

Construction Start: TBD

In-Service Date: TBD

Permitting / Siting Status:

Certificate of Environmental Compatibility issued 1/23/1976 (Case No. 24, Decision No. 46802).