

[REDACTED]
[REDACTED]
SOUTHERN CALIFORNIA EDISON COMPANY
FACILITIES STUDY

December 1, 2006

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I. Executive Summary

[REDACTED] applied to the California Independent System Operator (CAISO) for the interconnection of 49.9MW of generation from their generating facility in Colton, CA to the CAISO Grid at the existing SCE Colton Cement – Fibre – Vista 66kV Line under the terms of SCE's Wholesale Distribution Access Tariff (WDAT).

The Project consists of a [REDACTED] simple-cycle [REDACTED] generator with a net output of 49.9 MW. [REDACTED] will connect the 49.9MW of gas turbine generation to the new SCE 66kV [REDACTED] and will interconnect to the CAISO Grid at the Vista Substation 220kV Bus.

The [REDACTED] will be connected to the SCE 66kV Line via a new 66kV Interconnection Facility to be owned, operated and maintained by SCE. [REDACTED] will engineer, design and construct the new 66kV Interconnection Facility to SCE's standards. For the purpose of this study, the new facility will be referred to as [REDACTED]

[REDACTED] will be served by one of the following two options:

Option 1 – Looped Substation

Loop the 66kV Colton Cement – Fibre - Vista line to form the Colton Cement – Vista [REDACTED] and the Fibre – [REDACTED] 66kV Lines. Connect the lines via a standard three element ring bus to a [REDACTED] Owned 66kV Transformer.

Option 2 – Tapped Substation

Tap the 66kV Colton Cement – Fibre - Vista line and retire Fibre Substation to form the Colton Cement – Vista – [REDACTED] 66kV line. Connect the line to a [REDACTED] owned 66kV Transformer.

[REDACTED] requested an interconnection date of June 1, 2007.

A Transmission System Impact Study (SIS) dated March 8, 2006, was prepared to address the impact of the new generation to the SCE Transmission System.

A Sub – Transmission System Impact Re-Study dated November 2, 2006, was prepared to address the impact of the new generation to the SCE Sub – Transmission System.

II. System Impact Study Results

The sub-transmission SI Re-Study concluded that the sub-transmission system is not adequate to support the new generation. The transmission SIS concluded that the transmission system is not adequate to support the new generation

The Transmission SIS analyzed the SCE System under the following conditions:

1. Devers – Harquahala (DPV2) 500kV Transmission Line in service.
2. West of Devers upgrades in service.
3. Rancho Vista 500/220kV Substation in service.
4. Jurupa 220/66kV Substation in service.

The Studies found the following overloaded elements:

BASE CASE:

Approximately 0.10 miles of existing overhead conductor on the Bloomington-Colton-Colton Cement 66kV line will be loaded to 106% of its normal loading criteria under base case conditions due to the [REDACTED]

SINGLE (N-1) CONTINGENCIES:

The [REDACTED] aggravates four pre-project overloads triggered by interconnections placed ahead of the [REDACTED] in the Application Queue.

Mira Loma – Walnut 220kV T/L N – 1 Rating 2000A Loaded to 2295A (115%)
Transmission Outage: Mira Loma – Olinda 220kV T/L

Mira Loma – Vista #2 220kV T/L N – 1 Rating 2480A Loaded to 3074A (123%)
Transmission Outage: Devers – Valley 500kV T/L

Etiwanda – Vista 220kV T/L N – 1 Rating 2000A Loaded to 2848A (142%)
Transmission Outage: Devers – Valley 500kV T/L

Etiwanda-San Bernardino 220kV T/LN – 1 Rating 2000A Loaded to 2803A (140%)
Transmission Outage: Devers – Valley 500kV T/L

DOUBLE (N-2) CONTINGENCIES:

The [REDACTED] aggravates four pre-project overloads triggered by interconnections placed ahead of the [REDACTED] in the Application Queue.

Mira Loma – Walnut 220kV T/L N – 2 Rating 2000A Loaded to 2175A (117%)
Transmission Outages: Chino – Mira Loma and Mira Loma – Olinda 220kV T/Ls

Mira Loma – Vista #2 220kV T/L N – 2 Rating 2480A Loaded to 3842A (155%)
Transmission Outages: Etiwanda-San Bernardino and Etiwanda-Vista 220kV T/Ls

Etiwanda – Vista 220kV T/L N – 2 Rating 2000A Loaded to 3847A (192%)
Transmission Outages: Etiwanda-San Bernardino and Mira Loma-Vista 220kV T/Ls

Etiwanda-San Bernardino 220kV T/LN – 2 Rating 2000A Loaded to 2350A (117%)
Transmission Outages: Etiwanda – Vista and Mira Loma – Lugo 220kV T/Ls

The Sub-Transmission System Impact Re-Study recommended the following solution to eliminate the overload:

For the base case overload: reconductor 0.10 miles of overhead conductor.

The Transmission System Impact Study recommended the following solutions to eliminate the overloads:

1. Increase the thermal capability of the Mira Loma – Walnut, Mira Loma – Vista #2, Etiwanda – San Bernardino, and Etiwanda – Vista 220kV Transmission Lines.
2. Upgrade 220kV substation terminal equipment at Etiwanda, Mira Loma, Vista and Walnut Substations.

The Transmission System Impact Study also identified three locations where the system fault duty will increase by 0.1kA or more as a result of the new generation, and recommended that the circuit breakers be investigated to determine whether replacements or upgrades are required.

III. Facilities Study Assumptions

- a. All required ISO metering equipment at the generation facility will be provided by Wellhead and is not included in the Facilities Study.
- b. The required RTU and associated equipment to be placed at the [REDACTED] [REDACTED] will be installed by SCE and it is included in the Facilities Study.
- c. Engineering and construction of the [REDACTED] will be completed by Wellhead and is not included in the Facilities Study.

IV. Facilities Study Scope

The Facilities Study shows the scope of work and the cost estimate for the following work required for the interconnection:

Pursuant to FERC's orders 2006-A (Small Generators) and 2003-A (Large Generators) all Facilities Studies are required to provide the customer with its "maximum possible funding exposure, which shall include the costs of upgrades that are reasonably allocable to the Interconnection Customer at the time the estimate is made, and the costs of any upgrades not yet constructed that were assumed in the interconnection studies for the Interconnection Customer but are, at the time of the estimate, an obligation of an entity other than the Interconnection Customer."

To comply with the FERC orders, the Facilities Study will include:

CASE A: All facilities required exclusively by the [REDACTED]

And

CASE B: All additional facilities that may be required by the [REDACTED]

The facilities included on Case B are those additional facilities required to remedy situations caused by earlier Projects, placed ahead of the [REDACTED] in the Application Queue, and are expected to be implemented by them.

However, in the event that any of these earlier Projects withdraws their Application, the [REDACTED] may become responsible for any or all of these additional facilities.

The [REDACTED] potential "maximum costs exposure" is identified by all the elements listed under both Case A and Case B combined.

CASE A:

- Install one interconnection facility:
 - Option 1: install three 66kV CB Positions equipped with two 66kV Lines
 - Option 2: install one 66kV CB Position equipped with one 66kV Line
- For the purpose of this facility study, the new interconnection facility will be named [REDACTED]
- Reconductor 0.10 miles of overhead conductor.
- Install new RTU at Wellhead Substation to transmit generation information to the Mira Loma Regional Control Center (RCC).
- Evaluate circuit breakers short circuit capability at two 220kV stations. The evaluation determined that circuit breaker replacements and/or upgrades are required for two different conditions as follows:

For this case, which identifies only the circuit breaker replacements and upgrades triggered by the [REDACTED], the evaluation concluded that no circuit breaker upgrades or replacements are needed.

CASE B:

- This case identifies all the circuit breaker replacements and upgrades required, including those triggered by Applicants placed ahead of the Project in the Application Queue. Under this case, 14 66kV circuit breaker replacements are needed at Vista Substation. Also, a total of 23 220kV circuit breakers replacements and the installation of 32 sets of TRV's to upgrade 44 circuit breakers are required at Devers, Etiwanda, Mira Loma and Vista Substations.

V – A. Facilities Study Results – CASE A

The following Interconnection Facilities are required:

A. Sub-Transmission:

1. Colton Cement – Fibre – Vista 66kV Line:

Loop Substation – Option 1

Loop the Colton Cement – Fibre – Vista 66kV Line to form the Colton Cement – Vista – [REDACTED] and Fibre – [REDACTED] 66kV Lines.

This work requires the installation of 4 tubular steel poles and approximately 800 double circuit ft. of 954 SAC.

Note: The tubular steel poles have a long lead time and we will not be able to meet a 7/2007 operating date.

Tap Substation – Option 2

Retire the existing Fibre Substation and serve the customer from the distribution system. Tap the line to form the Colton Cement – Vista – [REDACTED] 66kV Line.

This work requires the installation of [REDACTED] wood poles and approximately 1600 ft. of single circuit 336 ACSR.

2. Bloomington – Colton – Colton Cement 66kV Line:
Reconductor 0.10 miles of overhead conductor with 336 ACSR conductor.

B. Substation:

- 1A. [REDACTED] – Scope of Work by [REDACTED]

Loop Substation – Option 1

Engineer and construct a 66kV interconnection facility, with [REDACTED] 66kV CB's to provide two-line service to serve one generator owned transformer bank. Also install a Mechanical-Electrical Equipment Room (MEER).

All work to be performed according to SCE Engineering, Design, Materials and Construction Standards.

Tap Substation – Option 2

Engineer and construct a 66kV interconnection facility, with [REDACTED] 66kV CB to provide one-line service to serve [REDACTED] generator owned transformer bank. Also install a Mechanical-Electrical Equipment Room (MEER).

All work to be performed according to SCE Engineering, Design, Materials and Construction Standards.

1B [REDACTED] – Scope of Work by SCE

Review the complete engineering and design drawings, and bill of materials submitted by [REDACTED] to verify their compliance with the SCE Engineering and design Standards.

Inspect the site during construction to verify compliance with SCE Materials and Construction Standards.

Test the substation prior to energization by SCE.

[REDACTED] will deed [REDACTED] to Edison including a 10' easement around each side of the new substation.

C. Telecommunications:

Tap an existing SCE fiber optic cable and install approximately 3000 ft. of fiber cable to provide diverse entrances to the new [REDACTED]. Install approximately 2000 ft. of 5" PVC conduit. Install one new SNET OC-1 optical multiplexor at [REDACTED]. Install channel equipment at [REDACTED]. Make incremental additions to existing OC-1 multiplexers at Vista and Colton Cement Substations.

D. Power System Controls:

Install a new smart multi-ported Remote Terminal Unit (RTU) at [REDACTED] and a second RTU installed at the customer site to provide generation data to the SCE Grid Control Center.

E1.	Estimated cost – Option 1 Loop Substation:	\$ 2,220,750
E2.	Estimated cost – Option 2 Tap Substation:	\$ 1,573,100

See Exhibit C for cost breakdown

V – B. Facilities Study Results – Case B

The following additional System Upgrades are required to support the new interconnection under Case B:

A. Transmission:

1. Mira Loma – Vista #2 220kV T/L:
Upgrade the line by replacing 15.5 circuit miles of existing 2-1033 KCMIL ACSR conductors with new 2-1590 KCMIL ACSR conductors. This upgrade requires the following structure modifications:
 - Raise [REDACTED] existing double circuit lattice towers
 - Install [REDACTED] interest double circuit poles

- Replace [REDACTED] double circuit lattice towers with similar structures

This work requires the replacement of all the existing hardware/insulator assemblies with new assemblies and polymer type insulators.

2. Etiwanda – San Bernardino 220kV T/L:

Upgrade the line by eliminating line to ground clearance restrictions which presently limit the line rating to lesser values than those of the existing 2-1033 KCMIL ACSR conductors.

This upgrade requires the raising of [REDACTED] existing suspension lattice structures and the installation of one additional interest dead-end transmission pole.

This work also requires the lowering of existing distribution circuits at [REDACTED] locations and the undergrounding of [REDACTED] segment of 66kV line at [REDACTED] location where the line crosses over them and also the trimming of trees at [REDACTED] locations.

3. Etiwanda-Vista 220kV T/L

Upgrade the line by replacing 15.3 circuit miles of existing 2B-1033 kcmil ACSR conductors with new 2B-1590 kcmil ACSR conductors. This upgrade requires the following structure modifications:

- Raise [REDACTED] existing double circuit lattice towers
- Install [REDACTED] interser double circuit poles
- Replace [REDACTED] double circuit lattice towers

This work requires the replacement of all the existing hardware/insulator assemblies with new assemblies and polymer type insulators.

B. Substation:

1. Devers Substation:

Replace 8 220kV circuit breakers and upgrade 2 220kV circuit breakers by installing 3 sets of TRV's.

2A. Etiwanda Substation (Terminal Upgrades):

Replace two 220kV, 1200A disconnect switches with 220kV, 2000A disconnect switches on Pos. 2X and the existing 220kV, 2000A wave trap on Pos. 5X to 220kV, 4000A.

2B. Etiwanda Substation (Circuit Breaker Upgrades):

Replace 3 220kV circuit breakers and upgrade 20 220kV circuit breakers by installing 14 sets of TRV's. Upgrade the switchyard to 83kA.

3A. Mira Loma Substation (Terminal Upgrades):

Replace the existing 220kV, 3000A wave trap on Pos. 15 to 220kV, 4000A.

3B. Mira Loma Substation (Circuit Breaker Upgrades):

Replace 12 220kV circuit breakers. Upgrade the switchyard to 83kA.

4A. Vista Substation (Terminal Upgrades):

Replace both of the existing 220kV, 3000A wave traps on Pos. 2 and 3 to 220kV, 4000A. Upgrade the existing incoming line drop on Pos. 2 from 2-1033 ACSR conductors to 2-2156 ACSR conductors.

4B. Vista Substation (Circuit Breaker Upgrades):

Replace [REDACTED] 66kV, 26kA and [REDACTED] 66kV, 27kA circuit breakers with new 66kV, 40kA circuit breakers. Upgrade 22 220kV circuit breakers by installing 15 sets of TRV's.

5. Walnut Substation

Remove the existing 220kV, 2000A wave trap from Pos. 7.

Additional Estimated costs: \$84,889,200

See Exhibit C for cost breakdown

VI. Conclusions

- a. The estimated cost for the Interconnection is approximately \$2,220,750 for Case A option 1 (looped substation) and \$1,573,100 for Case A option 2 (tapped substation) with the potential additional cost of \$84,889,200 for a total project "maximum exposure" of \$87,109,950 for option 1 and \$86,462,300 for option 2.
- b. Generally, the completion of the proposed project option 1 requires approximately 18 months, which includes engineering review, material procurement, and construction. Generally, the completion of the proposed project option 2 requires approximately 7 months, which includes engineering review, material procurement, and construction. Two weeks of acceptance testing and pre-operations validation are necessary before releasing the substation to grid operations and the CASIO.
- c. The costs indicated in the attached tables are 2007 dollars and are not firm, these are preliminary estimates only. These cost estimates are based on conceptual engineering and system unit costs, and are subject to change based on the final design and actual material costs. This Facilities Study and cost estimates as presented are valid for a period of 90 days.
- d. The estimated Project Cost will be reconciled to actual costs upon closure of the subject work orders. The necessary billing adjustments will be made at that time.

EXHIBIT A
SUBSTATION

**PAGES OMITTED FOR
CEII REGULATIONS**

EXHIBIT B
MAJOR EQUIPMENT

MAJOR EQUIPMENT
CASE A – OPTION 1 – LOOPED SUBSTATION

NEW [REDACTED] SUB – TO BE DESIGNED AND CONSTRUCTED BY [REDACTED]

66kV Ring Bus Rack
66kV Circuit Breakers
66kV Group Operated - Vertically Mounted Disconnect Switches
66kV Lightning Arrestors
66kV Potential Transformers
66kV Dead End Rack
Remote Terminal Unit (RTU)

TRANSMISSION:

Tubular Steel Poles
Feet of double circuit 954 SAC

POWER SYSTEM CONTROL

SCE equipment at Wellhead Generating Facility
Remote Terminal Unit (RTU)

CASE A – OPTION 2 – TAPPED SUBSTATION

NEW WELLHEAD SUB – TO BE DESIGNED AND CONSTRUCTED BY [REDACTED]

66kV Dead End Racks
66kV Circuit Breakers
66kV Group Operated - Vertically Mounted Disconnect Switches
66kV Potential Transformers
Remote Terminal Unit (RTU)

TRANSMISSION:

Wood Poles
Feet of single circuit 336 ACSR

POWER SYSTEM CONTROL

SCE equipment at Wellhead Generating Facility
Remote Terminal Unit (RTU)

ADDITIONAL MAJOR EQUIPMENT FOR CASE B

220kV Circuit Breakers
66kV Circuit Breakers
220kV TRV Line to Ground Capacitors with individual steel pedestals
220kV 2000A Disconnect Switches



220kV 4000A Wave Traps

220kV Interset Double Circuit Poles

220kV Double Circuit Lattice Towers

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12/1/06

EXHIBIT C
COST SUMMARY

[REDACTED] - Case A

Cost Estimate Summary (2007 Dollars)

Scope: Interconnect 49.9MW of generation to the [REDACTED] 66kV Bus.

The interconnection requires the installation of a new 66kV Switching Station. [REDACTED] will design and construct the Substation. Edison will review the design, inspect construction and test equipment. It also requires telecommunication facilities for the line protection and a new RTU at the [REDACTED] plus upgrades of the existing RTUs at Colton Cement and Vista Substations.

OPTION 1: LOOPED SUBSTATION

ELEMENT	INTERCONNECTION FACILITIES		DISTRIBUTION UPGRADES		RELIABILITY UPGRADES		ONE TIME NON-REFUNDABLE	Income Tax Component of Contribution *	ONE TIME PAYMENT
	Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M			
[REDACTED] SCE Scope of Work	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transmission Line	\$ 650,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 227,500	\$ 877,500
Telecommunications (Line Protection)	\$ 564,000	\$ 48,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 214,200	\$ 826,200
Power Systems Control - RTU	\$ 301,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 105,350	\$ 406,350
Power Systems Control - Upgrades	\$ 77,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 26,950	\$ 103,950
TOTAL	\$ 1,592,000	\$ 48,000	\$ 48,000	\$ -	\$ -	\$ -	\$ -	\$ 575,750	\$ 2,220,750

OPTION 2: TAPED SUBSTATION

ELEMENT	INTERCONNECTION FACILITIES		DISTRIBUTION UPGRADES		RELIABILITY UPGRADES		ONE TIME NON-REFUNDABLE	Income Tax Component of Contribution *	ONE TIME PAYMENT
	Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M			
[REDACTED] SCE Scope of Work	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transmission Line	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 140,000	\$ 540,000
Telecommunications (Line Protection)	\$ 195,000	\$ 48,000	\$ 48,000	\$ -	\$ -	\$ -	\$ -	\$ 85,050	\$ 328,050
Power Systems Control - RTU	\$ 77,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 87,850	\$ 336,850
Power Systems Control - Upgrades	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ 26,950	\$ 103,950
Removal of Fibre Substation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,750	\$ 6,750
Convent Fibre to 12kV Service	\$ -	\$ -	\$ 130,000	\$ -	\$ -	\$ -	\$ 80,000	\$ -	\$ 80,000
TOTAL	\$ 923,000	\$ 183,000	\$ 183,000	\$ -	\$ -	\$ -	\$ 80,000	\$ 387,100	\$ 1,573,100

Additional Elements for Case B

Cost Estimate Summary (2008 Dollars)

Scope: Install two sets of TRV's to upgrade one CB at Vincent Substation

ELEMENT	INTERCONNECTION FACILITIES		DISTRIBUTION UPGRADES		RELIABILITY UPGRADES		ONE TIME NON-REFUNDABLE	Income Tax Component of Contribution *	ONE TIME PAYMENT
	Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M	Not Subject to O&M			
Mira Loma - Vista #2 220kV TIL	\$ -	\$ -	\$ -	\$ -	\$ 16,000,000	\$ -	\$ -	\$ -	\$ 15,000,000
Elwanda - San Bernardino 220kV TIL	\$ -	\$ -	\$ -	\$ -	\$ 1,594,000	\$ -	\$ -	\$ -	\$ 1,594,000
Elwanda - Vista 220kV TIL	\$ -	\$ -	\$ -	\$ -	\$ 18,500,000	\$ -	\$ -	\$ -	\$ 18,500,000
Devers Sub. - Replace 8 CB's, Upgrade 2 CB's	\$ -	\$ -	\$ -	\$ -	\$ 4,240,000	\$ -	\$ -	\$ -	\$ 4,240,000
Elwanda Sub. - Replace DS, CB's and upgrade to 66kA	\$ -	\$ -	\$ -	\$ -	\$ 18,811,000	\$ -	\$ -	\$ -	\$ 18,811,000
Mira Loma Sub. - Replace wave trap, CB's, upgrade to 83kA	\$ -	\$ -	\$ -	\$ -	\$ 22,637,000	\$ -	\$ -	\$ -	\$ 22,637,000
Vista Sub. - Replace 220kV wave trap, CB's, upgrade CB's	\$ -	\$ -	\$ -	\$ -	\$ 2,405,000	\$ -	\$ -	\$ -	\$ 2,405,000
Vista Sub. - Replace 14 66kV CB's	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,656,200	\$ 1,656,200
Walnut Sub. - Remove wave trap	\$ -	\$ -	\$ 4,732,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 56,000
TOTAL	\$ -	\$ -	\$ 4,732,000	\$ -	\$ 33,233,000	\$ -	\$ -	\$ 1,656,200	\$ 34,865,200

This document includes confidential trade secrets and proprietary information of Southern California Edison, to be used only by [REDACTED] in connection with its evaluation of this Facility Study Proposal. Southern California Edison retains all rights to maintain the confidentiality of this information and requests that [REDACTED] preserve its confidentiality.

* ITCC tax (calculated at 35%) is collected via Letter of Credit.
 * Pursuant to FERC Order 2003A, there will be no ITCC collected on Reliability Upgrades.

EXHIBIT D
PROJECT SCHEDULE

PROJECT SCHEDULE

CASE A

OPTION 1 - LOOPED SUBSTATION PROJECT APPROVAL ELEMENT	START	END
Initial Work Orders	Month 1	Month 2
New Switching Station	Month 2	Month 3
Start of MA8	Month 3	Month 4
Start of MA9	Month 4	Month 5
Start of MA10	Month 5	Month 6
Start of MA11	Month 6	Month 7
Start of MA12	Month 7	Month 8
Start of MA13	Month 8	Month 9
Start of MA14	Month 9	Month 10
Start of MA15	Month 10	Month 11
Start of MA16	Month 11	Month 12
Start of MA17	Month 12	Month 13
Start of MA18	Month 13	Month 14
Start of MA19	Month 14	Month 15
End of MA19	Month 15	Month 16
End of MA18	Month 14	Month 15
End of MA17	Month 13	Month 14
End of MA16	Month 12	Month 13
End of MA15	Month 11	Month 12
End of MA14	Month 10	Month 11
End of MA13	Month 9	Month 10
End of MA12	Month 8	Month 9
End of MA11	Month 7	Month 8
End of MA10	Month 6	Month 7
End of MA9	Month 5	Month 6
End of MA8	Month 4	Month 5

OPTION 2 - ZAPPED SUBSTATION PROJECT APPROVAL ELEMENT

OPTION 2 - ZAPPED SUBSTATION PROJECT APPROVAL ELEMENT	START	END
Initial Work Orders	Month 1	Month 2
New Switching Station	Month 2	Month 3
Start of MA8	Month 3	Month 4
Start of MA9	Month 4	Month 5
Start of MA10	Month 5	Month 6
Start of MA11	Month 6	Month 7
Start of MA12	Month 7	Month 8
Start of MA13	Month 8	Month 9
Start of MA14	Month 9	Month 10
Start of MA15	Month 10	Month 11
Start of MA16	Month 11	Month 12
Start of MA17	Month 12	Month 13
Start of MA18	Month 13	Month 14
Start of MA19	Month 14	Month 15
End of MA19	Month 15	Month 16
End of MA18	Month 14	Month 15
End of MA17	Month 13	Month 14
End of MA16	Month 12	Month 13
End of MA15	Month 11	Month 12
End of MA14	Month 10	Month 11
End of MA13	Month 9	Month 10
End of MA12	Month 8	Month 9
End of MA11	Month 7	Month 8
End of MA10	Month 6	Month 7
End of MA9	Month 5	Month 6
End of MA8	Month 4	Month 5

ADDITIONAL ELEMENTS FOR CASE B

ELEMENT	START	END
MIRA LOMA - 157A & 220KV TL UPGRADES	Month 1	Month 2
Engineering & Design	Month 1	Month 2
Major Equipment Procure & Deliver	Month 2	Month 3
Construction	Month 3	Month 4
ETWANDA - SAN BERNARDINO 220KV TL UPGRADES	Month 4	Month 5
Engineering & Design	Month 4	Month 5
Major Equipment Procure & Deliver	Month 5	Month 6
Construction	Month 6	Month 7
ETWANDA - 157A 220KV TL UPGRADES	Month 7	Month 8
Engineering & Design	Month 7	Month 8
Major Equipment Procure & Deliver	Month 8	Month 9
Construction	Month 9	Month 10
REAR LOMA SUB	Month 10	Month 11
Engineering & Design	Month 10	Month 11
Major Equipment Procure & Deliver	Month 11	Month 12
Construction	Month 12	Month 13
MIRA LOMA SUB	Month 13	Month 14
Engineering & Design	Month 13	Month 14
Major Equipment Procure & Deliver	Month 14	Month 15
Construction	Month 15	Month 16
ETWANDA SUB	Month 16	Month 17
Engineering & Design	Month 16	Month 17
Major Equipment Procure & Deliver	Month 17	Month 18
Construction	Month 18	Month 19
WALNUT SUB	Month 19	Month 20
Engineering & Design	Month 19	Month 20
Major Equipment Procure & Deliver	Month 20	Month 21
Construction	Month 21	Month 22
ETWANDA SUB	Month 22	Month 23
Engineering & Design	Month 22	Month 23
Major Equipment Procure & Deliver	Month 23	Month 24
Construction	Month 24	Month 25
WALNUT SUB	Month 25	Month 26
Engineering & Design	Month 25	Month 26
Major Equipment Procure & Deliver	Month 26	Month 27
Construction	Month 27	Month 28
ETWANDA SUB	Month 28	Month 29
Engineering & Design	Month 28	Month 29
Major Equipment Procure & Deliver	Month 29	Month 30
Construction	Month 30	Month 31
WALNUT SUB	Month 31	Month 32
Engineering & Design	Month 31	Month 32
Major Equipment Procure & Deliver	Month 32	Month 33
Construction	Month 33	Month 34

The Start Date of Case B will depend on the System Conditions at five times of the Project which will determine when the additional upgrades will be required.