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APPLICATION OF EL PASO	§	BEFORE THE STATE OFFICE
ELECTRIC COMPANY TO CHANGE	§	OF
RATES	§	ADMINISTRATIVE HEARINGS

EL PASO ELECTRIC COMPANY'S SUPPLEMENTAL RESPONSE TO
CITY OF EL PASO'S EIGHTH REQUEST FOR INFORMATION
QUESTION NOS. CEP 8-1 THROUGH CEP 8-13

CEP 8-3:

Please provide the original budget, final cost, purpose and plant in service date of each of the top 20 highest distribution capital additions whose costs have been included in the Company's DCRF since the Company's last base rate case, along with information explaining the reasons for any increase in the original budget cost of each project of more than 10%.

SUPPLEMENTAL RESPONSE:

In accordance with the agreement with counsel from the City of El Paso, El Paso Electric Company ("EPE") was given additional time to draft its response to CEP 8-3.

EPE has identified the "top 20 highest distribution capital additions" included in the distribution cost recovery factors ("DCRF") it filed in Public Utility Commission of Texas Docket Nos. 49148 and 49395 that are not blanket projects. This response includes both a general description of EPE's planning and budgeting processes as well as an individual analysis for each project's included in the table below.

Table CEP 8-3.1

*Top 20 DCRF Projects
(Docket Nos. 49148 and 49395)¹*

Project Number	Project Description	Project Total less AFUDC and CE&S	Page
DT359	NUWAY NEW DISTRIBUTION SUBSTATION	\$14,431,157	5
DT371	EXECUTIVE (CE-1) NEW SUBSTATION	\$11,021,964	6
DT229	SCOTSDALE TRANSFORMER & SWITCHGEAR REPLACEMENTS	\$8,159,325	7
DT220	SANTA FE SUBSTATION TRANSFORMER, SWITCHGEAR, AND EQUIPMENT UPGRADES	\$7,420,698	8
DT186	LEO SUBSTATION 115 KV CONVERSION & GETAWAY UPGRADE	\$6,899,678	9
DT365	SPARKS T2 TRANSFORMER, SWITCHGEAR, AND VOLTAGE REGULATORS	\$3,784,491	10
DT382	RIPLEY T2 TRANSFORMER, SWITCHGEAR, AND VOLTAGE REGULATOR ADDITIONS	\$3,397,392	11
DT379	PENDALE T2 TRANSFORMER, SWITCHGEAR, AND VOLTAGE REGULATOR ADDITIONS	\$3,351,288	12
DT389	SUNSET NORTH AUTO TRANSFORMER REPLACEMENT	\$3,223,211	13
DT291	GLOBAL REACH T2 AND SWITCHGEAR	\$3,009,279	14
DT194	SUNSET 69KV-4KV TRANSFORMER, REGULATORS, AND FEEDER REPLACEMENTS	\$1,947,525	15
DT383	PELLICANO T2 TRANSFORMER ADDITION	\$2,628,214	16
DT184	RIO BOSQUE CAPACITOR BANK ADDITION	\$2,139,566	17
DT218	SUNSET 14KV SWITCHGEAR AND NETWORK FEEDER REPLACEMENTS	\$2,382,644	18
DT353	STREET CAR (TROLLEY) - CITY OF EL PASO	\$1,706,470	19
DT300	FARMER 69KV 7.5 MVAR CAPACITOR BANK	\$1,659,158	20
DT361	SUBSTATION CIRCUIT BREAKER UPGRADES MPS	\$1,443,037	21
DT417	MONTWOOD T1 TRANSFORMER UPGRADE TO 50 MVA	\$1,484,196	22
DT392	SOL & VISTA DISTRIBUTION SUBSTATION UPGRADES	\$1,524,823	23
DT404	MONTWOOD SUBSTATION LAND & PRE-FAB WALL	\$1,642,242	24

¹ The project costs shown in this response do not include AFUDC or Capitalized Engineering and Supervision (CE&S) allocations, which are not included in the original project budgets.

Capital Planning Process

Historically, EPE has identified major capital transmission and distribution projects through its 10-year planning process for transmission (known as the annual transmission 10-year expansion plan) along with its 10-year planning process for distribution (known as the annual distribution 10-year expansion plan). The transmission planning process involves analyzing the bulk transmission electric system, but also focuses on addressing distribution load-serving needs and the necessary upgrades or replacements to reliably serve that load. Additionally, the need for capital projects may be identified by planned maintenance needs, imminent needs such as equipment failure, or unanticipated system changes. Capital project planning is an ongoing process that considers both transmission and distribution activities in conjunction with all of these scenarios of identifying project needs. Accordingly, the scope of a project may change over time as a result of the ongoing capital project planning processes for both transmission and distribution as new needs arise along with alternatives for addressing the needs.

Budgeting Process

A budget is initially developed to reflect the initial scoping for a particular project. This initial budget presents a preliminary budget estimate based on the identified driving need for the activity. This scoping and budgeting then evolve as the project moves forward as a result of the capital project planning processes described above.

Internal cost estimates are uploaded into the Company's Power Plan cost repository on a semi-annual basis without contingencies. Two budget versions are provided below. The Scope Zero budget version is considered the first time a system need was identified, even though it may be that the scope is still being defined based on overall system needs. The Pre-Construction Budget is when most contract services have been bid but before any major internal construction efforts have started. EPE has identified the approximate dates each budget version was developed in the individual analyses provided below.

Sometimes opportunities to perform additional upgrades to equipment to prepare for anticipated load increases or technology needs are identified after work on a project has begun. This additional work is added to the project scope once it is determined that the additions are reasonable, necessary, and prudent. EPE has found that retrofitting completed projects to accommodate new technology is both time consuming and expensive. As a result, the Company may at times expand projects or incorporate newer technology at the time of construction to avoid subsequent retrofits and redeployment of engineering and technical resources. The Company has found that addressing operational opportunities is often optimal while the project is ongoing as opposed to retrofitting projects in the future after the project is completed. This forward-looking approach tends to save costs in the longer term and thus results in lower overall costs to customers.

Common Variances

During the period covered by the design and construction of the distribution projects included in this response, a few common changes in policy and standards took place:

- Transformers changed from 30 Mega Volt-Ampere (“MVA”) to 50 MVA: In 2016 the decision was made that any new distribution substations or expanded distribution substations should use transformers with a 50 MVA rating. This decision was made to accommodate future load growth and so it would be possible to offload transformers more frequently for planned maintenance cycles. This approach to proactively augment capacity has implications on existing substations beyond just accommodating the transformer. The bus, breakers, grounding, controls, and ancillary infrastructure (e.g., grounding) must all be evaluated and improvements determined necessary to support the improved capacity.
- Upgraded switchgear equipment: As technology enhancements are made in automation and switching, our switchgear specifications have evolved and these changes are incorporated into the equipment. This equipment must be upgraded to meet the transformer upgrades as well.

In addition, inflationary escalation of costs may be a factor for projects that were initially budgeted more than a few years ago.

DT359 - NUWAY SUBSTATION

Scope Zero Budget estimated May 2013

Pre- Construction Budget estimated November 2018

In Service Date 12/17/2019

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET		
\$ 14,431,157	\$ 4,099,229	\$ 10,331,928	252%	\$ 12,168,853	\$ 2,262,304	19%	

The project was necessary to improve system reliability and serve load growth in the west EPE service territory. Further project details can be found in the direct testimony of EPE witness Mr. Doyle in Docket No. 52915, page 40 line 25 through page 41, line 21.

The Scope Zero assumed the new substation would be located northwest of Interstate 10 ("I-10") and would include a six-position ring bus with two 30 MVA transformers, two switchgears, and four feeders. This initial location would have required routing a 115 kilovolt ("kV") transmission line across Interstate 10 and was a smaller lot. The decision was made to acquire property closer to existing transmission infrastructure and run distribution feeders across I-10 instead of the transmission line, which would help to expedite construction.

This substation was also chosen to be EPE's first automated substation to include new technology to aid in faster recovery during transformer operations, reduce the number of hardwired alarms, and allow for remote monitoring of substation equipment.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Transformers changed from 30 MVA to 50 MVA.
- The switchgear was upgraded from the standard configuration to one that supports a higher reliability, aids the automation processes, and provides flexibility to perform maintenance in critical substation equipment without taking any feeders out of service. The engineering and technician labor needed for the first implementation of these automated systems was more than had been initially estimated.
- The substation site was larger than initially estimated and required additional grading and drainage work.

DT371 – CE-1 TEMP AND EXECUTIVE SUBSTATION

Scope Zero Budget estimated May 2014

Pre-Construction Budget estimated May 2019

In Service Dates: CE-1 Temp Substation 7/12/2018, Executive Substation 5/22/2020

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 11,021,964	\$ 7,418,929	\$ 3,603,035	49%	\$ 10,447,063	\$ 574,901	6%

This project was necessary to improve system reliability and serve load growth in the central EPE service territory. Further project details can be found in the direct testimony of EPE witness Mr. Doyle in Docket No. 52915, page 41, line 23 through page 42, line 24.

The Company reviewed several locations in the area requiring load support based on their proximity to existing feeders and for their ability to add new feeders to handle the increase in area loading. The Scope One assumptions included plans for a larger six-position ringbus to support more feeders out of the substation. EPE could not locate reasonably priced, available land that could accommodate the six-position ringbus, so the substation configuration was downsized to a four-position ringbus, which allowed the Company to address the immediate load growth in a smaller lot size. The expected load growth will be addressed by a future substation, shown as CE-2 in system planning documents, and will provide additional load support in the area.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Addition of a temporary substation due to delays in land acquisition for permanent substation and to provide backup for Mesa substation. The transformers at Mesa are near end of life and the CE-1 temp substation is needed until Mesa substation is rebuilt or replaced.
- Change to a prefabricated Electric Supply Station (“ESS”) from a traditional ESS to reduce demand on internal construction resources and to provide the required space around the substation to operate maintenance vehicles in the future.
- The addition of an underground drainage system, per City of El Paso, Texas, requirements, due to space constraints not allowing for a traditional drainage pond area.
- Asphalt installation around the substation needed to meet grounding requirements.

DT229 – SCOTSDALE TRANSFORMER & SWITCHGEAR REPLACEMENTS

Scope Zero Budget estimated May 2009

Pre-Construction Budget estimated November 2017

In Service Date 12/20/2018

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 8,159,325	\$ 5,592,460	\$ 2,566,865	46%	\$ 7,193,333	\$ 965,993	13%

The purpose of this project was to improve system reliability and serve load growth in the East EPE service territory. The equipment being replaced was largely at the end of its useful life. Further project details can be found in the direct testimony of EPE witness Mr. Doyle in Docket No. 52915, page 42 line 26 through page 43, line 20.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Transformers changed from 30 MVA to 50 MVA
- Upgraded switchgear equipment and technology.
- Addition of drainage pond and new rock wall on back of property per City of El Paso ordinance.
- Relocation of a waterline discovered on the backside of the property, which had not been identified on any prior surveys.

DT220 – SANTA FE SUBSTATION TRANSFORMER, SWITCHGEAR, AND EQUIPMENT UPGRADES

Scope Zero Budget estimated May 2008

Pre-Construction Budget estimated May 2017

In Service Dates: Santa Fe Substation 3/19/2019; Dallas Relay Upgrades 9/15/19; Sunset Relay Upgrades 3/14/2019

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 7,420,698	\$ 1,708,000	\$ 5,712,698	334%	\$ 3,737,992	\$ 3,682,706	99%

The purpose of this project was to improve system reliability and serve load growth in downtown El Paso. The equipment being replaced was at the end of its useful life. Further project details can be found in the direct testimony of EPE witness Mr. Doyle in Docket No. 52915, page 43 line 22 through page 44, line 22.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Discovery of an old coal vault and conveyor belt under the substation that was causing significant damage to existing concrete slab foundations. The station was at risk of sinking into the ground and causing outages and irreparable damage to critical equipment.
- The two main options were to rebuild the substation elsewhere downtown or remove the equipment from the substation and excavate and fill the cavern below the substation. To avoid a lengthy and expensive process of using condemnation to secure a new location near existing feeders and transmission lines, EPE opted to excavate and backfill the site with the appropriate fill material.
- Initial budget assumptions planned for completion of the project in 2010. Complicated offloading and outage requirements needed for these upgrades delayed it for several years. The general inflationary escalation in costs from 2008, when the budget was created, until 2016, when major engineering work started also contributed to the variance from original budget.
- Upgraded switchgear technology and equipment.

DT186 – LEO SUBSTATION 115KV CONVERSION AND GETAWAY UPGRADE

Scope Zero Budget estimated May 2007

Pre-Construction Budget estimated May 2015

In Service Dates: Leo East (LEA) substation 3/23/2017; Dyer substation improvements 3/31/2017

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 6,899,678	\$ 3,684,871	\$ 3,214,808	87%	\$ 5,014,748	\$ 1,884,930	38%

This project was necessary to improve system reliability and serve load growth in the Northeast EPE service territory. Further project details can be found in the direct testimony of EPE witness R. Clay Doyle in Docket No. 52915, page 44 line 24 through page 45, line 26.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Initial budget assumptions planned for completion of the complete substation in 2011. The general escalation in costs from 2009, when the budget was created, until 2015, when the next phase in major engineering work started, also contributed to the variance from original budget.
- The 115kV upgrade of Leo was tied to the upgrade of Dyer substation, which unexpectedly required an upgrade to the high side bus circuit breaker plus related equipment, a new dead end tower to receive the new conductor, as well as upgrades to the control equipment which had not been included in the original budget.
- A rock wall was built around the substation instead of chain link fencing and new sidewalks were added to scope per City of El Paso ordinance.

DT365 – SPARKS T2 TRANSFORMER, SWITCHGEAR, AND VOLTAGE REGULATORS

Scope Zero Budget estimated November 2013

Pre-Construction Budget estimated May 2017

In Service Date 3/8/2018

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 3,784,491	\$ 1,834,651	\$ 1,949,840	106%	\$ 3,110,608	\$ 673,884	22%

The purpose of this project was to improve system reliability and serve load growth in the Far East EPE service territory. An additional transformer, switchgear, and related equipment were needed to take three additional feeders out of Sparks substation. Further project details can be found in the direct testimony of EPE witness Mr. Doyle in Docket No. 52915, page 47 line 21 through page 48, line 11.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Transformers changed from 30 MVA to 50 MVA.
- Upgraded switchgear technology and equipment.
- Original budget assumed the existing control equipment enclosure could be expanded to include the second switchgear, but after a more detailed engineering review was completed, it was determined the available substation space would not accommodate that type of expansion due to clearance and space requirements needed to for the safety of EPE maintenance personnel in the future. A Power Control Room with switchgear that would fit in the allocated space was required to be purchased instead.

DT382 – RIPLEY T2 TRANSFORMER, SWITCHGEAR, AND VOLTAGE REGULATOR ADDITIONS

Scope Zero Budget estimated May 2015

Pre-Construction Budget estimated May 2018

In Service Date 7/18/2019

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 3,397,392	\$ 2,180,444	\$ 1,216,948	56%	\$ 3,768,405	\$ (371,013)	-10%

This project was necessary to improve system reliability and serve load growth in the west EPE service territory. The project included the addition of one 50 MVA transformer, circuit breakers, voltage regulators, power control room with switchgear, steel bus and related protection, control, and communication equipment needed to serve three additional feeders from this substation.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Transformers changed from 30 MVA to 50 MVA.
- Upgraded switchgear equipment and technology.
- Upgrades to the electrical equipment inside the control equipment enclosure were needed to meet new loading requirements.

**DT379 – PENDALE T2 TRANSFORMER, SWITCHGEAR, AND VOLTAGE
REGULATOR ADDITIONS**

Scope Zero Budget estimated May 2015

Pre-Construction Budget estimated November 2018

In Service Date 12/6/2019

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 3,351,288	\$ 1,620,201	\$ 1,731,086	107%	\$ 2,711,297	\$ 639,991	24%

This project was necessary to improve system reliability and serve load growth in the Far east EPE service territory. The project included the addition of one 50 MVA transformer, circuit breakers, voltage regulators, expansion of the ESS to install new switchgear, steel bus, and communication equipment needed to serve three additional feeders from this substation.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Transformers changed from 30 MVA to 50 MVA.
- Upgraded switchgear equipment and technology.
- Upgrades to the electrical equipment inside the control equipment enclosure were needed to meet new loading requirements.

DT389 – SUNSET NORTH AUTOTRANSFORMER REPLACEMENTS

Scope Zero Budget estimated May 2016

Pre-Construction Budget estimated November 2017

In Service Dates: Sunset North T1 2/03/2018 ; Sunset North T3 10/21/2019

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET		
\$ 3,223,211	\$ 1,257,143	\$ 1,966,067	156%	\$ 2,574,173	\$ 649,037	25%	

The purpose of this project was to improve system reliability and serve load growth in the Downtown EPE service territory. The project included the replacement of Sunset North T1 115kV/69kV autotransformer, Sunset North T3 115kV/13.8Kv transformer, the related circuit breakers, protection and communication equipment, upgraded steel bus structures, and switches. Both transformers had significant maintenance issues and were at the end of their useful lives.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- The addition of the replacement of the Sunset North T3 transformer to the scope of the project due to gassing and maintenance issues.
- Crane costs had not been included in original budget and both transformer foundations had to be redone to accommodate the new transformer sizes and connections.

DT291- GLOBAL REACH T2 AND SWITCHGEAR

Scope Zero Budget estimated May 2011

Pre-Construction Budget estimated November 2017

In Service Date 8/2/2018

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 3,009,279	\$ 1,544,012	\$ 1,465,267	95%	\$ 2,432,357	\$ 576,923	24%

The purpose of this project was to improve system reliability and serve load growth in the East EPE service territory. The project included the addition of one 50 MVA transformer, circuit breakers, voltage regulators, Power Control Room with switchgear, steel bus and related protection, control, and communication equipment needed to serve three additional feeders from this substation.

Major equipment and scope changes which contributed to the increase from scope zero, to pre-construction budget to actual costs in the project include:

- Transformers changed from 30 MVA to 50 MVA.
- Upgraded switchgear equipment and technology.
- Upgrades to the electrical equipment inside the Control Equipment Enclosure were needed to meet new loading requirements.

DT194 – SUNSET 69KV-4KV TRANSFORMER, REGULATORS, AND FEEDER REPLACEMENTS

Scope Zero Budget estimated May 2008

Pre-Construction Budget estimated May 2016

In Service Dates: Underground Sunset feeders 5/30/2017, 5/31/2017, 6/27/2017, 6/29/2017, 1/31/2018, 6/15/2018, 8/15/2018; Sunset switchgear and voltage regulators 10/30/2017

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 1,947,525	\$ 1,109,659	\$ 837,866	76%	\$ 1,174,337	\$ 773,188	66%

The purpose of this project was to improve system reliability and serve load growth in the Downtown EPE service territory. The switchgear and voltage regulators were at the end of their useful life and the feeders support the downtown, University of Texas at El Paso, and medical facilities in the immediate area.

Major equipment and scope changes which contributed to the increase from scope zero, to pre-construction budget to actual costs in the project include:

- The budget created in 2008 assumed the feeders would be gradually moved to the new switchgear and changed out from 2011 – 2017. Escalation assumptions for materials and labor were made at the company level for forecasting purposes but are not reflected in the individual project budget. Due to construction resource constraints and outage planning for other projects in the Downtown area underground network, the feeder work did not start until 2017. The estimated materials and labor cost estimates were rolled forward in the budget process without escalations for inflation.
- New conduit and power cable had to be run from the regulators to the switchgear but digging new trenches to lay the conduit took longer than expected because of the space constraints at the substation. This contributed to labor and subcontractor cost increases.

DT383 – PELLICANO T2 TRANSFORMER ADDITION

Scope Zero Budget estimated May 2015

Pre-Construction Budget estimated May 2017

In Service Date 3/9/2018

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 2,628,214	\$ 1,657,556	\$ 970,658	59%	\$ 2,360,303	\$ 267,911	11%

The purpose of this project was to improve system reliability and serve load growth in the Far east EPE service territory. The project included the addition of one 50 MVA transformer, circuit breakers, voltage regulators, expansion, and upgrade of existing ESS for the installation of the new switchgear, steel bus and communication equipment needed to serve additional feeders from this substation.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Transformers changed from 30 MVA to 50 MVA.
- Upgraded switchgear equipment and technology.
- Upgrades to the electrical equipment inside the Control Equipment Enclosure were needed to meet new loading requirements.

DT184 – RIO BOSQUE CAPACITOR BANK ADDITION

Scope Zero Budget estimated May 2007

Pre-Construction Budget estimated November 2017

In Service Date 5/15/2019

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 2,139,566	\$ 250,000	\$ 1,889,566	756%	\$ 1,747,962	\$ 391,604	22%

The purpose of this project is to provide voltage support in the Far East area of EPE service territory. The project included the addition of 2-stage 15 MVar Capacitor Banks at Rio Bosque substation, the related circuit breakers, protection and communication equipment, and a new drainage pond and entry to the substation.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Additional property had to be purchased adjacent to the existing substation to expand and accommodate the new capacitor bank.
- Substantial grading and drainage improvements were needed to prevent the potential for flooding of the substation entry access point.

DT218 – SUNSET 14KV SWITCHGEAR AND NETWORK FEEDER REPLACEMENTS

Scope Zero Budget estimated May 2008

Pre-Construction Budget estimated May 2017

In Service Date 5/22/2020

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET	PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET
\$ 2,382,644	\$ 1,522,010	\$ 860,634 57%	\$ 1,669,457	\$ 713,188 43%

This project was necessary to improve reliability and load growth in the Downtown area of the EPE service territory. This project involved the replacement of the 14kV switchgear and the downtown network feeders coming out of the new switchgear up to the first junctions of each feeder.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Downtown network feeders require crews with underground experience and safety training. EPE was and is experiencing a shortage in available qualified underground crews and opted to contract the completion of the Network splicing and replacement to a contractor, which was the main contributor to the cost increase.

DT353 – STREET CAR (TROLLEY) – CITY OF EL PASO

Scope Zero Budget estimated November 2014

Pre-Construction Budget estimated May 2016

In Service Dates: 1/15/2017 and 3/31/2017

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 1,706,470	\$ 470,117	\$ 1,236,353	263%	\$ 1,054,982	\$ 651,488	62%

The purpose of this project was to relocate or modify EPE facilities at the request of the City of El Paso to accommodate the Street Car project. The project includes major structural improvements required to support the southern loop of the Streetcar Project along Franklin Avenue, Santa Fe Street, and Kansas Street. Numerous manholes were unexpectedly impacted by the project, which required significant changes to the infrastructure in order to accommodate the streetcar route. Additionally, major structural improvements to support the Streetcar Project along N Organ Street from W. Crosby Avenue to E. Yandell Drive were also added in this project. Additional manholes and six, three-phase circuits were impacted by this portion of the project, which required significant changes to the infrastructure in order to accommodate the streetcar route.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- The budget was updated as manhole entrances were identified, re-engineered and structural modification plans were finalized.

DT300 – FARMER 69KV 7.5 MVAR CAPACITOR BANK ADDITION

Scope Zero Budget estimated May 2011

Pre-Construction Budget estimated May 2016

In Service Date 12/19/2016

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 1,659,158	\$ 336,173	\$ 1,322,985	394%	\$ 1,294,407	\$ 364,751	28%

The purpose of this project was to provide voltage support in the Far east area of the EPE service territory. This project involved the addition of 2-stage 15-MVar capacitor banks, the related circuit breakers, and related protection and communication equipment.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- The capacitor bank could not be accommodated within the existing substation footprint, so additional land was purchased for the equipment.
- The additional land required additional grading and drainage improvements in the project.

DT361 SUBSTATION CIRCUIT BREAKER UPGRADES FOR MPS

Scope Zero Budget estimated May 2013

Pre-Construction Budget estimated May 2015

In Service Dates: Ascarate 3/1/2017; Sunset North 2/3/2018; Montwood 11/4/2016

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 1,443,037	\$ 452,303	\$ 990,735	219%	\$ 1,786,746	\$ (343,709)	-19%

The purpose of this project was to continue to upgrade circuit breakers identified in the System Impact study for the Montana Power Station.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- The initial budget was split out based on the Burns & McDonald Facility Study, which was based on simple upgrades for each circuit breaker identified as having short circuit potential and an expansion of equipment to receive a new line at Montwood Substation. The last circuit breakers replaced under this project required more than a one for one replacement and the work at Montwood Substation required additional grounding and drainage improvements.
- Work at the Ascarate Substation included replacement of foundation for one circuit breaker, new underground conduit and new power cable from circuit breaker to control equipment, new relays, and expanded ground grid infrastructure around circuit breaker.
- Work on the Sunset North Substation circuit breaker required a new foundation, new bus supports and switch stands, new underground conduit for new power cable from circuit breaker to control equipment, and new relays.
- Work at the Montwood Substation included an expansion of the grounding grid to eliminate touch potential of the existing fencing. The drainage pond was expanded and additional improvements were made to mitigate flooding and access issues at the substation.

DT417 MONTWOOD T1 TRANSFORMER UPGRADE TO 50 MVA

Scope Zero Budget estimated May 2017

Pre-Construction Budget estimated May 2018

In Service Date 4/15/2019

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 1,484,196	\$ 889,140	\$ 595,056	67%	\$ 1,261,737	\$ 222,459	18%

This project was necessary to replace the existing 30 MVA transformer (T1) at Montwood Substation with a 50 MVA due to load growth in the Far East area of the EPE service territory. Due to the long lead time of substation transformers, this initial project budget only consisted of the estimated cost to replace a 115kV/23.8kV 30MVA transformer with a 115kV/23.9kV 50MVA for project approval purposes, while the high side bus was being evaluated by engineering.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- The low side of the transformer connection that was needed to be upgraded to meet new 50 MVA rated transformer and the switches, breakers, and bus upgrades had not been included in the original materials estimate.
- New bus differential relay racks were also needed due to the increased rating and had not been included in the initial estimate

DT392 SOL & VISTA DISTRIBUTION SUBSTATION UPGRADES

Scope Zero Budget estimated May 2016

Pre-Construction Budget estimated November 2016

In Service Date 6/3/2017

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 1,524,823	\$ 1,184,969	\$ 339,854	29%	\$ 962,783	\$ 562,040	58%

The purpose of this project was to upgrade the ring bus at both Sol and Vista Substations to allow for the transmission line between these substations to be upgraded to 115kV. This project is needed to provide reliability and serve load growth in the EPE service territory. This project involved upgrading the high side bus equipment at both substations. Initial budget assumptions were made before the existing transmission dead end structures in each substation had been finalized for the new line rating.

Major equipment and scope changes that contributed to the increase from Scope Zero and from Pre-Construction Budget to actual costs in the project include:

- Sol Substation required an expansion and one new dead end tower, and Vista substation required two new dead end towers to receive the upgraded transmission conductor.
- Sol Substation required the replacement of some of the existing bus structures to meet new height requirements for phase to ground clearance.
- An additional circuit breaker was identified by substation maintenance as needing to be replaced at Sol Substation during the planned outage for this project. That replacement was done under this project number.

DT404 MONTWOOD LAND & PRE-FAB WALL

Scope Zero Budget estimated May 2017

Pre-Construction Budget estimated November 2017

In Service Dates: Land Purchase 12/31/2019, Wall 5/30/2018

COST INCLUDED IN RATE CASE REQUEST	SCOPE ZERO BUDGET	VARIANCE TO SCOPE ZERO BUDGET		PRE CONSTRUCTION START BUDGET	VARIANCE TO PRE CONSTRUCTION BUDGET	
\$ 1,642,242	\$ 1,598,413	\$ 43,829	3%	\$ 1,592,783	\$ 49,459	3%

This project was necessary to secure permanent rights to the land that was being leased for Montwood Substation. The lease agreement had a clause requiring the construction of a wall, instead of the chain link fence, upon EPE's exercising the right to purchase the property.

This project was not over budget by more than 10%.

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