



Additional Documents Distributed for the Regular City Council Meeting October 2, 2019

| Item No. | Agenda Item Description | Distributor | Document |
|----------|---|--|----------------------|
| 4 | Merchant Minute | Justin Prietto | Photos |
| 5 | City Promotional Video | John Pope, Public Information Officer | PowerPoint and Video |
| 6 | Councilmember Communications | Councilmember Cacciotti | Photos |
| 6 | Councilmember Communications | Mayor Pro Tem Joe | Photos |
| 6 | Councilmember Communications | Mayor Khubesrian | Flyer;Photo |
| 12 | Authorize the First Amendment to the Professional Services Agreement with Wildan Engineering Incorporated for Code Enforcement Services | Margaret Lin, Manager of Long Range Planning and Economic Development | Memo |
| 14 | Appeal of the Planning Commission Decision (817 Orange Grove Place) | Margaret Lin, Manager of Long Range Planning and Economic Development | Memo |
| 14 | Appeal of the Planning Commission Decision (817 Orange Grove Place) | Kanika Kith, Manager of Long Range Planning and Economic Development | PowerPoint |
| 14 | Appeal of the Planning Commission Decision (817 Orange Grove Place) | Elizabeth Hollingsworth, Resident | PowerPoint |
| 16 | HDL Sales Tax Presentation | Tom Bachman, HDL | PowerPoint |
| 17 | Southern California Edison Liability Report | Jeannette Soriano, Government Relations Manager Southern California Edison | PowerPoint |











SOUTH PASADENA CITY VIDEO

John Pope, Public Information Officer
October 2, 2019

Goals

- Showcase City at overseas trips, meetings with dignitaries, outside agencies, etc.
- Capture the energy, vibrancy and uniqueness of South Pasadena
- Build pride in the City
- Promote economic development
- Distribute via City web site, YouTube, social media, e-news

Thanks and Recognition

Retail, Sales and Non-profit

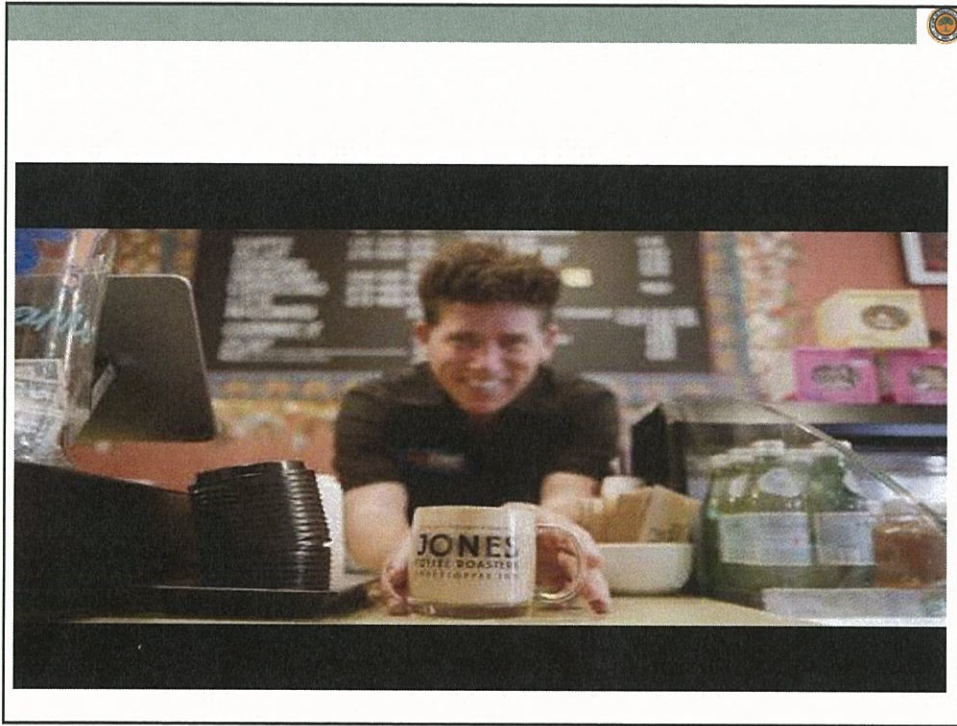
- Dual Crossroads
- Jasleen Boutique
- Meg Middleman Real Estate
- Old Focals Optical
- Peltier Home
- South Pasadena Museum
- Square Deal Barber
- Videotheque

Eateries and Food

- Aro Latin
- Bistro De La Gare
- Fair Oaks Pharmacy
- Farmers Market
- Gus's BBQ
- Jones Coffee
- Mamma's Pizza
- Nicole's Market & Café

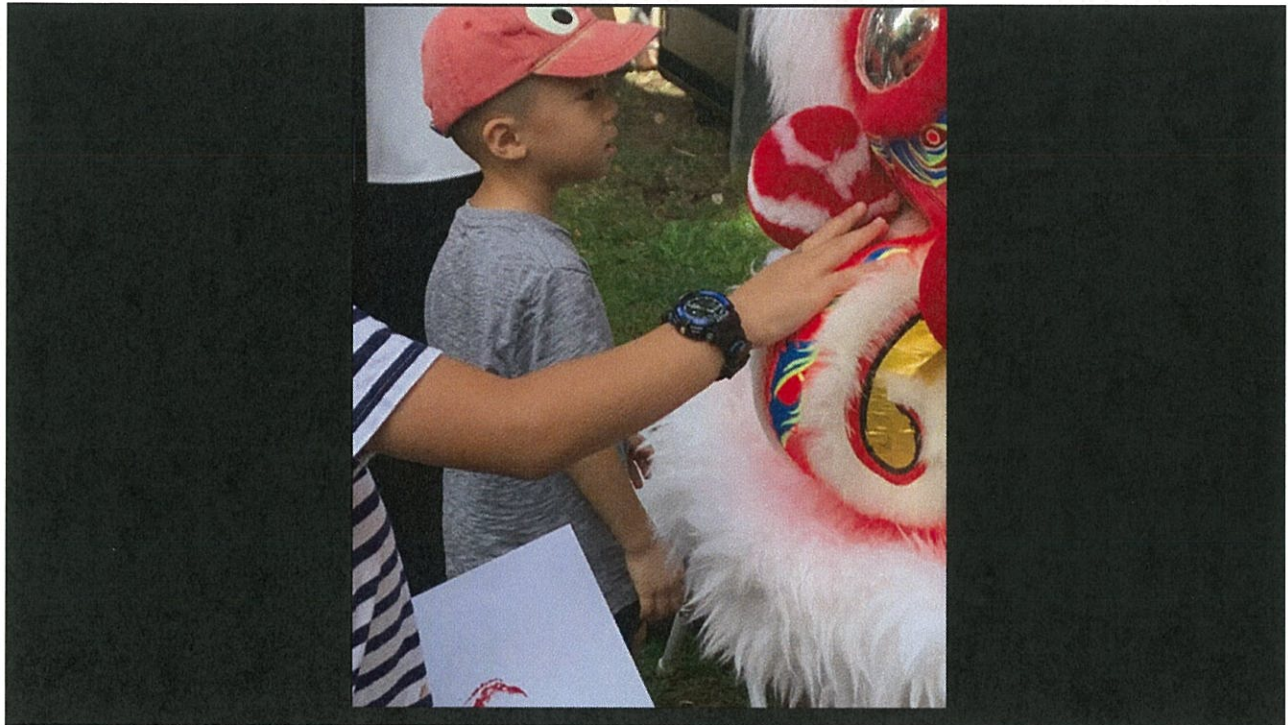
Thanks and Recognitions

- Media 360
 - Sandra Holden, Chaz Curry, Danyel Johnson
- City Staff
 - Christina Munoz
 - Marisol Romero, Kristine Courdy, Karen Aceves, Tamara Binns
 - Jose Villegas, Logan How, Francois Brard, Joan Aguado
- Extras
 - Max Nuñez, Aaron Courdy
 - And introducing...Kylie Courdy





















*South Pasadena Unified School District
Visual Arts Departments*

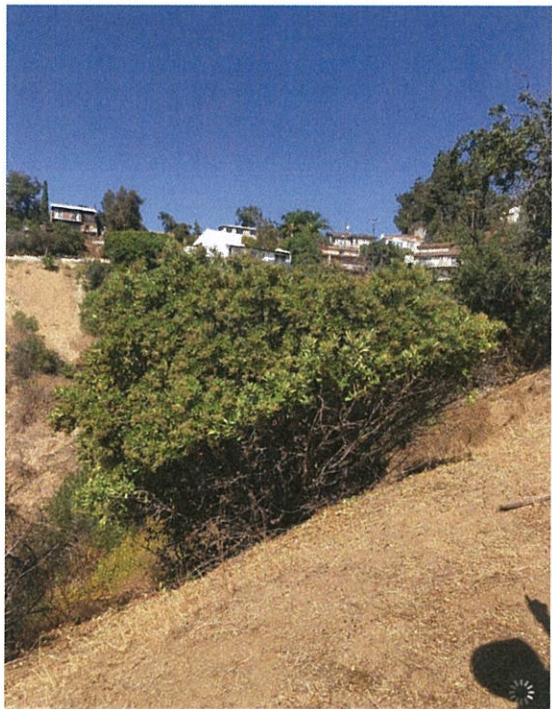
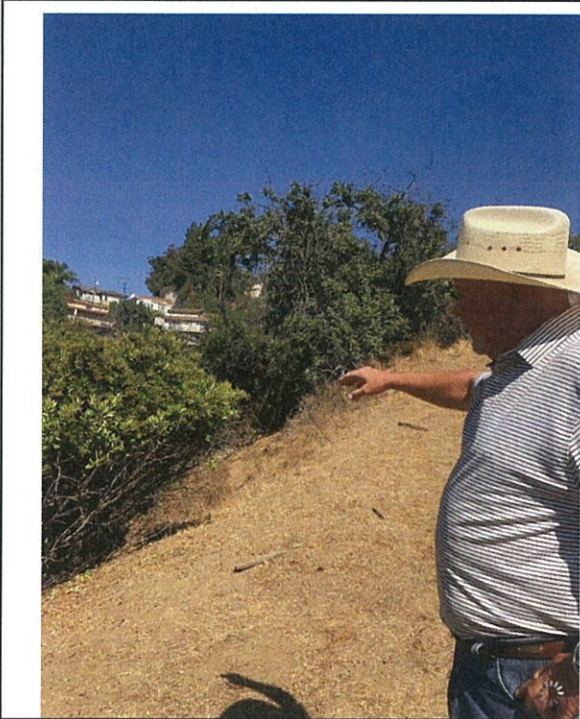
Highlighting Grades TK - 12th



Visual Arts Teachers

- Sarit Swanborn, Elementary School, TK-5th
- Denise Tanaka, Middle School, 6-8th
- Aimee Levie-Hultman, High School, 9-12th
- Rouzanna Berberian, High School, 9-12th

The complex block features a grid of 20 small images on the left, each showing a different student art project displayed on a bulletin board. The projects include colorful patterns, drawings, and various artistic compositions. To the right of the grid is a larger white area containing the title 'South Pasadena Unified School District Visual Arts Departments' in italics, followed by a horizontal line and the subtitle 'Highlighting Grades TK - 12th' also in italics. Below the subtitle is a stylized line drawing of a bird or winged creature. Underneath the drawing is the heading 'Visual Arts Teachers' in bold, followed by a list of four teachers and their respective schools and grade levels.





**You're invited!
Coffee with the
City Manager & Mayor**

Please join South Pasadena City Manager Stephanie DeWalle and Mayor Marina Khubessian for a casual conversation over coffee. It will be an opportunity for members of the community to drop in, ask questions and discuss City issues.

Berry Opera
811 Fair Oaks Ave
2 p.m. to 3:30 p.m.
Thursday, October 3, 2019
Info: (626) 403-7203.



SOUTH PASADENA FIRE ASSOCIATION

**FIRST ANNUAL
SPAGHETTI DINNER**

**Saturday, October 19, 2019
4 PM to 7 PM**

**South Pasadena Fire Station 81
817 Mound Ave
South Pasadena, CA 91030**

**Tickets can be purchased in advance
at the fire station or at the event
\$7 Adults - \$3 Children**

Raffle Tickets will be available for Purchase at Event

**All proceeds will go to City of Hope
Breast Cancer Research**

Presented by Local 3657



FOR MORE INFORMATION PLEASE CALL 626.403.7300



City of South Pasadena
Planning and Building
Department

Memo

Date: October 2, 2018

To: The Honorable City Council

Via: Stephanie DeWolfe, City Manager *SD*

From: Margaret Lin, Manager of Long Range Planning and Economic Development *ML*

Re: October 2, 2019 City Council Meeting Item No. 12 Additional Document – Authorize the First Amendment to the Professional Services Agreement with Wildan Engineering Incorporated for Code Enforcement Services for a Total Not-To-Exceed Amount of \$83,780

Attached is an additional document which provides a corrected Total Not-To-Exceed amount for the contract amendment and clarification regarding the Fiscal Impact to extend the existing contract by twelve months.

Contract Amendment:

The contract amendment will increase the contract amount by \$56,620 for a Total Not-To-Exceed Amount of \$81,120.

Fiscal Impact:

The original contract from December 2018 to April 2019 had a Total Not-To-Exceed amount of \$24,500 (\$65/hour for four months). The contract extension would be billed retroactively at the same rate from May to September 2019 (\$24,700 for five months) and at a reduced rate of \$60/hour from October 2019 to April 2020 (\$31,920 for seven months) during recruitment. This would result in an increase to the contract amount by \$56,620, for a Total Not-To-Exceed contract amount of \$81,120. The current Planning and Building Department Professional Services Account (101-7010-7011-817) has a sufficient balance to fund the contract amount.

Additional Material
AGENDA ITEM # 12
10/12/19 City Council Mtg.

FIRST AMENDMENT TO
AGREEMENT FOR SERVICES

THIS AMENDMENT (“Amendment”) is made and entered into on the 2nd day of October, 2019 by and between the CITY OF SOUTH PASADENA (“City”) and Wildan Engineering, Incorporated.

RECITALS

WHEREAS, on December 3, 2018, the City Manager approved a Professional Services Agreement with Wildan Engineering Incorporated for code enforcement services and related activities; and

WHEREAS, the Term of the Agreement was through April 30, 2019, with the option to extend upon written agreement of the parties; and

WHEREAS, the Payment for Services in the Agreement shall not exceed the original authorized amount of \$24,500 unless the City has given specific advance approval in writing; and

WHEREAS, the City and Consultant desire to amend the scope of services to extend the agreement for twelve (12) additional months as authorized in the Agreement through April 30, 2020.

NOW, THEREFORE, THE CITY AND THE CONSULTANT AGREE AS FOLLOWS:

1. PAYMENT FOR SERVICES. That the twelve month extended agreement shall be billed at a rate of \$65 per hour for five months and a reduced rate of \$60 per hour for seven months and shall not exceed a total of \$56,620. The total project cost for the revised scope of services shall not exceed amount of \$81,120.
2. CONSULTANT SERVICES. That the scope of services of the Agreement would be amended to extend the agreement for twelve (12) additional months.
3. TERM. The term of this Agreement shall be extended from April 30, 2019 to April 30, 2020, or when the work is satisfactory completed, whichever occurs first, or unless extended by a supplemental amendment.
4. PROVISIONS OF AGREEMENT. All other terms, conditions, and provisions of the Agreement to the extent not modified by this Amendment, shall remain in full force and effect.

TO EFFECTUATE THIS AMENDMENT, the parties have caused their duly authorized representatives to execute this Amendment on the dates set forth below.

“CITY”
City of South Pasadena

“Consultant”
Wildan Engineering, Incorporated

By: _____
Signature

By: _____
Signature

Printed: Stephanie DeWolfe

Printed: _____

Title: City Manager

Title: _____

Date: _____

Date: _____

Attest:

By: _____
Evelyn G. Zneimer, City Clerk

Date: _____

Approved as to form:

By: _____
Teresa L. Highsmith, City Attorney

Date: _____




**City of South Pasadena
Planning and Building
Department**

Memo

Date: October 1, 2018

To: The Honorable City Council

Via: Stephanie DeWolfe, City Manager 

From: Margaret Lin, Manager of Long Range Planning and Economic Development *M.L.*

Re: October 2, 2019 City Council Meeting Item No. 14 Additional Document – Appeal of the Planning Commission Decision (Project No. 2221-Appeal) to Approve a New Triplex Development at 817 Orange Grove Place (APN: 5315-018-064)

Attached is an additional document which provides a corrected Project Description and clarification regarding the total number of bedrooms. The Staff Report inadvertently stated that the proposed triplex development would include a total of three units with four bedrooms. The correct Project Description should include a total of three units with five bedrooms. The additional document also provide clarification regarding the Public Works Conditions of Approval included in the Staff Recommendation.

Project Description:

On April 9, 2019, the Planning Commission approved the proposed project with two one-bedroom units and one two-bedroom unit. In accordance with the Planning Commission approval, the Planning Commission Chair conducted a Chair Review and approved revised plans with two one-bedroom units and one three-bedroom unit. The increased number of bedrooms in the middle unit is in compliance with the zoning code and does not change the parking requirements. The Project Description should be updated to read:

“The tri-plex project as approved by the Planning Commission consisted of two one-bedroom units at the front and rear, and one three-bedroom unit in the middle.”

Staff Recommendation:

It is recommended that the City Council deny the appeal and uphold the Planning Commission approval of a new tri-plex development located at 817 Orange Grove Place, subject to the Conditions of Approvals with additional conditions from Public Works. The property-owner does not intend to sell the proposed units and therefore a Tentative Tract Map is not required. The Public Works Conditions of Approval should not include Conditions 2 and 4 relating to the Tentative Tract Map.

Orange Grove Place

South Pasadena City Council

October 2, 2019















**DRB Meeting Dates
817 Orange Grove Place**

Dec. 16, 2014

January 5, 2017

May 5, 2015

July 5, 2015

January 7, 2016

October 4, 2018

October 6, 2016

November 3, 2016

Appeal Point #1

**We object to the conditional approval with
Chair Review.**

**We believe that the changes requested by the
Commission should be evaluated and discussed
in public view at a public hearing.**

Appeal Point #4

We believe that the auxiliary rooms labeled as office or rec room will be used as bedrooms, and should be counted as bedrooms for the purpose of determining the project's compliance, particularly with parking requirements.

RM Standards

Minimum Covered Parking:

1 space per bedroom

2 spaces per 2 bedroom or greater

Minimum Uncovered Parking:

1 guest space for every 2 units

Appeal Point #3

Parking will be negatively impacted by this development because of the large increase in the number of its residents.

Appeal Point #2

The development significantly and negatively impacts public safety and traffic on Orange Grove Place and Orange Grove Avenue as well as on McCammet Alley.



**Exiting McCamment Alley,
looking west to Orange Grove Ave.
Measures 11 ft wide**



**Entering McCamment Alley,
looking east at alley entry
from Orange Grove Ave.**

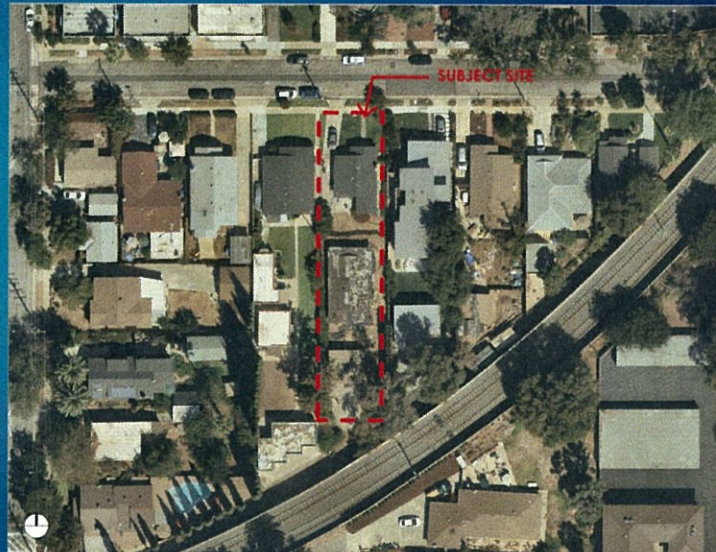
**THANK YOU,
City Council Members**

817 Orange Grove Place Appeal

2221-APPEAL
MULTI-FAMILY TRI-PLEX – PROJECT NO. 1750-NID-DRX
OCTOBER 2, 2019

Project Description

- ▶ General Plan: Medium Density Residential
- ▶ Zoning: Residential Medium Density
- ▶ Lot Size: 10,102 square feet (sq. ft.)





Project Timeline

- ▶ Dec. 2014: First DRB hearing – Continued
 - ▶ Multiple revisions and reviews
- ▶ Oct. 2018: DRB Denial - Project did not meet Finding #3 due to its massing, architectural articulation, and ignored recommendations
- ▶ Oct. 2018: Appeal by Applicant to PC
- ▶ Apr. 2019: PC approval revised project and referred the project to Chair Review to eliminate auxiliary rooms that could be used as extra bedrooms

Project Description

- ▶ Planning Commission Approval
 - ▶ Tri-Plex: 4,326 square feet
 - ▶ Unit A: 860 sq. ft. (1 bedroom)
 - ▶ Unit B: 1,733 sq. ft. (2 bedrooms)
 - ▶ Unit C: 1,733 sq. ft. (1 bedroom)
 - ▶ Parking: 4 covered and 2 uncovered
 - ▶ Height: 27 ft. max
 - ▶ Lot Coverage: 36 percent
 - ▶ Floor Area Ratio: 42.8 percent
- ▶ Planning Commission Chair Approval
 - ▶ Unit B: 1,733 sq. ft. (3 bedrooms)



Appeal

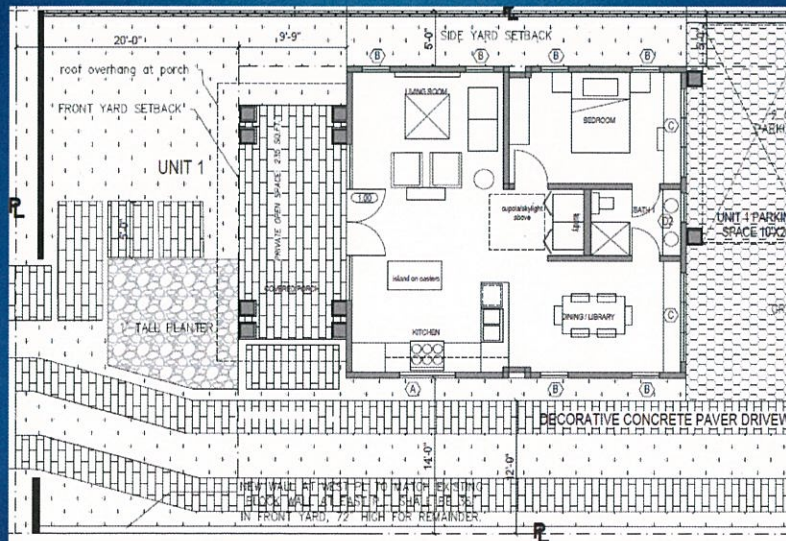
- ▶ Overturn the Planning Commission approval for construction of a new tri-plex development at 817 Orange Grove Place
 1. Object to Chair Review. Requested changes to be evaluated and discussed at a public meeting
 2. Impacts to traffic and public safety on McCamment Alley, Orange Grove Place, and Orange Grove Avenue.
 3. Impact to parking
 4. Extra rooms (office or rec room) should be counted as bedrooms for the purpose of determining the project's compliance with parking

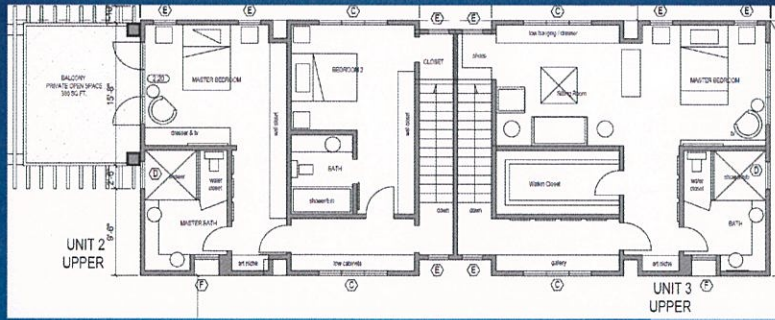
Recommendation

- ▶ Uphold Planning Commission Approval Subject to the Conditions of Approval with Additional Conditions from Public Works
 1. Staff and the Chair reviewed the revised plans and determined they were in compliance with the Conditions of Approval
 2. Proposed Project complies with the General Plan
 3. Proposed Project is parked in accordance with the Zoning Code requirements
 4. Auxiliary rooms were mitigated in the revised floor plans
- ▶ Proposed Project complies with all code requirements

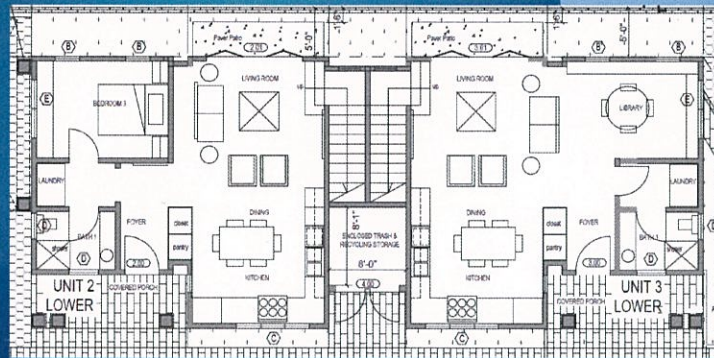
Questions

Unit A (Front): 1 Bedroom





Units B and C
(Back):
Unit B - 3 bedrooms
Unit C - 1 bedroom



South Pasadena Sales Tax

Bradley Burns 1.0% Sales Tax
and
Measure A .75% Transaction Tax

South Pasadena Sales Tax Rate – 9.5%

| | |
|---|----------------|
| State General Fund | 3.9375% |
| South Pasadena General Fund (Bradley-Burns) | 1.0000% |
| County Public Safety (Prop 172) | 0.5000% |
| County Realignment (Mental Health/Public Safety) | 1.5625% |
| Countywide Transportation Fund | <u>0.2500%</u> |
| Base Statewide Rate | 7.2500% |
| Prop A, Prop C, Measure R, Measure M Transit (4 x 0.5%) | 2.0000% |
| Los Angeles County Measure H Homeless Programs | <u>0.2500%</u> |
| Current Total South Pasadena Rate | 9.5000% |

Sales Tax Historical Results

| | | |
|---------|-------------|--------|
| 2016-17 | \$2,173,347 | Actual |
| 2017-18 | \$2,166,656 | Actual |
| 2018-19 | \$2,252,037 | Actual |

2019-20 \$2,130,802 Budget

(reflects the loss of OSH, Koi Loungewear, and Big Lots)

Sales Tax Makeup by Major Industry Group FY 19/20 Budget Projection

| | <u>Amount</u> | <u>% of Total</u> |
|---------------------------------|---------------------|-------------------|
| Restaurants and Hotels | \$ 570,322 | 26% |
| Food and Drugs | \$ 393,360 | 18% |
| General Consumer Goods | \$ 287,935 | 13% |
| State and County Pools | \$ 285,795 | 13% |
| Fuel and Service Stations | \$ 281,497 | 13% |
| Business and Industry | \$ 198,010 | 9% |
| Building and Construction | \$ 112,941 | 5% |
| Autos and Transportation | \$ 29,007 | 1% |
| Gross Sales Tax | \$ 2,158,867 | 100% |
| CDTFA Administration Cost | <u>\$ (28,065)</u> | |
| Total Sales Tax Revenues | \$ 2,130,802 | |

Transaction Taxes in Los Angeles County

- Currently there are 27 transaction taxes (TT's) in Los Angeles County
- 11 TT's were approved in 2018 and 2 TT's (Glendora and Arcadia) were approved in 2019
- 19 of those TT's are at the maximum cap of 10.25%

Transaction Taxes in Los Angeles County

- San Gabriel Valley cities with transaction taxes:
 - Pasadena, Arcadia, El Monte, South El Monte, La Puente, Covina, Glendora, Pomona (also, nearby cities: Glendale and Burbank)
- Other San Gabriel Valley cities with 0.75% transaction tax measures on the November 5 ballot
 - Claremont, Irwindale, Monrovia and Sierra Madre
- Additional cities considering transaction tax ballot measures:
 - Alhambra, Azusa, Cerritos, La Canada Flintridge, La Verne, Lakewood, Montebello, Paramount, San Gabriel and West Covina

Distribution of the Taxes

- **Bradley Burns 1.0% Sales Tax**
 - Tax is generally allocated to jurisdiction where the sale is negotiated or order is taken
- **Proposed Measure A 0.75% Transaction Tax**
 - Tax is allocated to the district where the goods are delivered or first place of use
- **Projected Revenue from 0.75% Transaction Tax**
 - \$1.5 Million

Impacts of New Transaction Tax

- \$100 restaurant bill – 0.75% TT adds 75cents
- \$75 cost to fill gas tank – TT adds 56 cents
- \$50 trip to the hardware store – TT adds 38 cents
- HdL analysis shows that additional transaction taxes do not impact shopping decisions
- This concern is further mitigated as more and more surrounding cities approve transaction taxes
- Local transaction taxes keep locally generated taxes in that city as compared to being spread countywide, ie. Measure H Homeless Tax

South Pasadena Sales Tax

Bradley Burns 1.0% Sales Tax
and
Measure A .75% Transaction Tax

South Pasadena Sales Tax Rate – 9.5%

| | |
|---|----------------|
| State General Fund | 3.9375% |
| South Pasadena General Fund (Bradley-Burns) | 1.0000% |
| County Public Safety (Prop 172) | 0.5000% |
| County Realignment (Mental Health/Public Safety) | 1.5625% |
| Countywide Transportation Fund | <u>0.2500%</u> |
| Base Statewide Rate | 7.2500% |
| Prop A, Prop C, Measure R, Measure M Transit (4 x 0.5%) | 2.0000% |
| Los Angeles County Measure H Homeless Programs | <u>0.2500%</u> |
| Current Total South Pasadena Rate | 9.5000% |

Sales Tax Historical Results

| | | |
|---------|-------------|--------|
| 2016-17 | \$2,173,347 | Actual |
| 2017-18 | \$2,166,656 | Actual |
| 2018-19 | \$2,252,037 | Actual |

2019-20 \$2,130,802 Budget

(reflects the loss of OSH, Koi Loungewear, and Big Lots)

Sales Tax Makeup by Major Industry Group FY 19/20 Budget Projection

| | <u>Amount</u> | <u>% of Total</u> |
|---------------------------------|---------------------|-------------------|
| Restaurants and Hotels | \$ 570,322 | 26% |
| Food and Drugs | \$ 393,360 | 18% |
| General Consumer Goods | \$ 287,935 | 13% |
| State and County Pools | \$ 285,795 | 13% |
| Fuel and Service Stations | \$ 281,497 | 13% |
| Business and Industry | \$ 198,010 | 9% |
| Building and Construction | \$ 112,941 | 5% |
| Autos and Transportation | \$ 29,007 | 1% |
| Gross Sales Tax | \$ 2,158,867 | 100% |
| CDTFA Administration Cost | <u>\$ (28,065)</u> | |
| Total Sales Tax Revenues | \$ 2,130,802 | |

Transaction Taxes in Los Angeles County

- Currently there are 27 transaction taxes (TT's) in Los Angeles County
- 11 TT's were approved in 2018 and 2 TT's (Glendora and Arcadia) were approved in 2019
- 19 of those TT's are at the maximum cap of 10.25%

Transaction Taxes in Los Angeles County

- San Gabriel Valley cities with transaction taxes:
 - Pasadena, Arcadia, El Monte, South El Monte, La Puente, Covina, Glendora, Pomona (also, nearby cities: Glendale and Burbank)
- Other San Gabriel Valley cities with 0.75% transaction tax measures on the November 5 ballot
 - Claremont, Irwindale, Monrovia and Sierra Madre
- Additional cities considering transaction tax ballot measures:
 - Alhambra, Azusa, Cerritos, La Canada Flintridge, La Verne, Lakewood, Montebello, Paramount, San Gabriel and West Covina

Distribution of the Taxes

- Bradley Burns 1.0% Sales Tax
 - Tax is generally allocated to jurisdiction where the sale is negotiated or order is taken
- Proposed Measure A 0.75% Transaction Tax
 - Tax is allocated to the district where the goods are delivered or first place of use
- Projected Revenue from 0.75% Transaction Tax
 - \$1.5 Million

Impacts of New Transaction Tax

- \$100 restaurant bill – 0.75% TT adds 75cents
- \$75 cost to fill gas tank – TT adds 56 cents
- \$50 trip to the hardware store – TT adds 38 cents
- HdL analysis shows that additional transaction taxes do not impact shopping decisions
- This concern is further mitigated as more and more surrounding cities approve transaction taxes
- Local transaction taxes keep locally generated taxes in that city as compared to being spread countywide, ie. Measure H Homeless Tax

Circuit Reliability Review

South Pasadena

2019

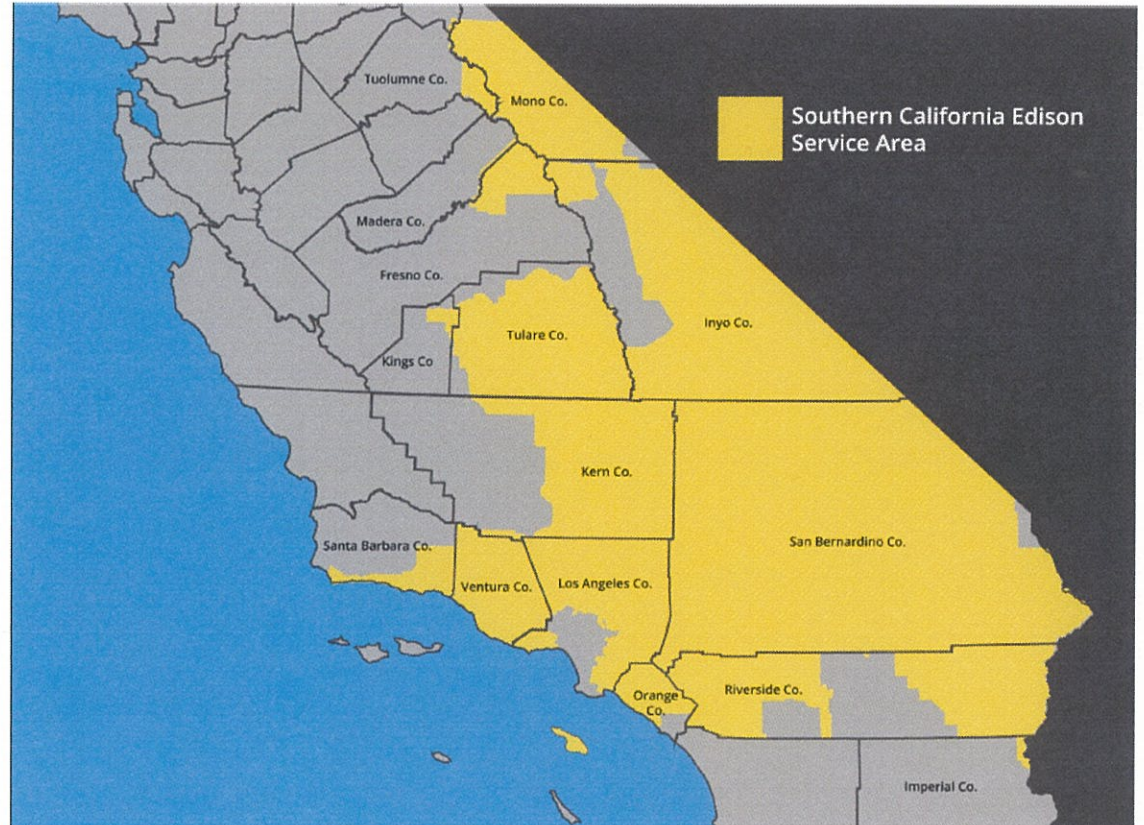
Energy for What's AheadSM



Additional Material
AGENDA ITEM # 16
10/12/19 City Council Mtg.

Who We Are

- Southern California Edison (SCE) is an Edison International company
- One of the nation's largest electric utilities
- More than 130 years of history
- Regulated by the California Public Utilities Commission (CPUC) and the Federal Energy Regulatory Commission (FERC)
- 50,000 square miles of SCE service area across Central, Coastal, and Southern California
- 15 million residents in service territory
- 5 million customer accounts in 445 cities and communities



Strengthening and Modernizing the Grid

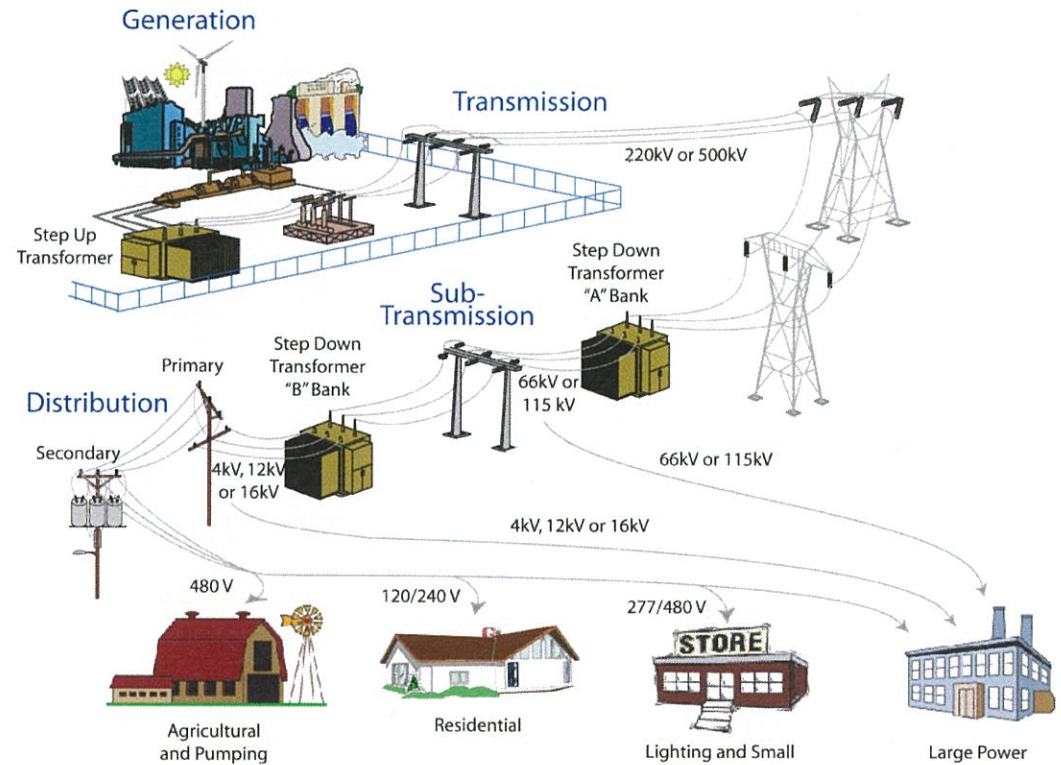
- To deliver power safely, reliably and affordably, we monitor and maintain a vast electricity system.
- We are working on reducing the threat of wildfires and to better integrate clean energy technologies being adopted by customers (including solar and electric vehicles) to meet California's ambitious climate change goals.

50,000 Square Miles

4,600 Circuits

1.5 Million Poles

119,000 Miles of Transmission and Distribution Lines



Building the Grid of the Future

SCE spends about \$4 billion each year to build infrastructure.

- Infrastructure reliability – updating underground cables, poles, switches, transformers
- Transmission – connecting renewables, installing new substations, updating lines
- Grid readiness – updating the grid for impacts from new technologies
- Future energy policy – energy storage, electric vehicles, renewables

Examples of 2018 Capital Investments

250 miles of underground cable replaced

780 miles of overhead conductor replaced for public safety

18,600 Distribution poles replaced

4,100 Transmission poles replaced

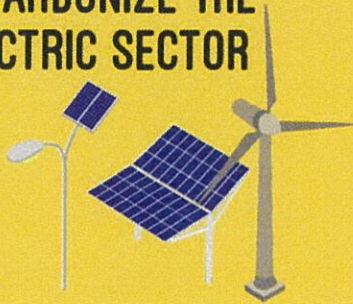
116 Underground structure replacements

SCE's investments support safe, reliable, affordable, and clean energy for our customers

Clean Energy: SCE's Clean Power and Electrification Pathway

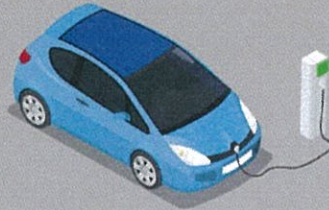
A Three Part, Integrated Solution

DECARBONIZE THE ELECTRIC SECTOR



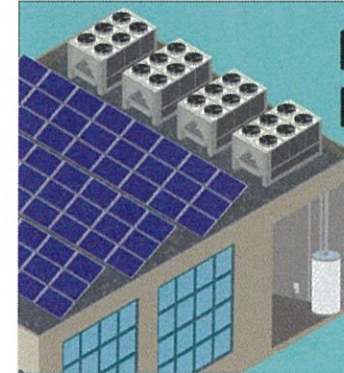
- By 2030, create an electric generation mix powered by as much as **80% carbon-free resources**.
- More **solar, wind, hydropower** and other zero-emission sources, along with **energy storage**.
- Currently at about 45%

ELECTRIFY THE TRANSPORTATION SECTOR



- Accelerate electrification of the transportation sector
 - By 2030, **electrify 25% of cars and trucks** – about 7 million in total.
 - 15% of medium-duty vehicles electrified
 - 6% of heavy-duty vehicles electrified

ELECTRIFY BUILDINGS



- Doubling of energy efficiency in existing buildings
- By 2030, electrify about **one-third** of space and water heating in buildings.
- Remove barriers to adoption and empower customers who want cleaner space and water heating options.

“SCE is changing... because our customers demand it,” Pedro Pizarro, president and CEO of Edison International, SCE's parent company

Working with customers to build a clean energy future

Clean Energy: Removing Barriers and Empowering Choice

DECARBONIZE THE ELECTRIC SECTOR



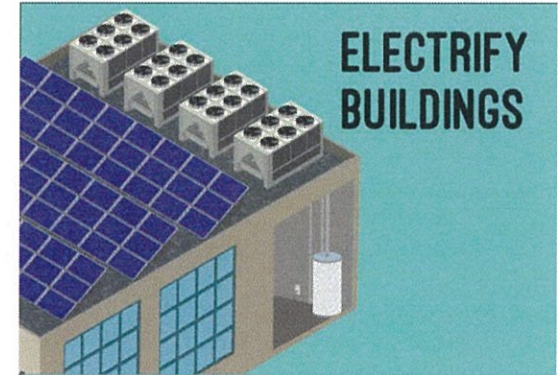
- Information, tools, and resources for customers looking to install solar
- Improved interconnection process for getting solar systems connected sooner
- Self Generation Incentive Program (SGIP) provides rebates for customers who install energy storage
- Green Rate for customers who don't want or can't install solar panels, but want more renewable energy

ELECTRIFY THE TRANSPORTATION SECTOR



- Clean Fuel Rewards offer \$1,000 rebate toward purchase or lease of electric vehicle (EV)
- If approved, Charge Ready 2 application will provide incentives for 48,000 public charging stations
- Charge Ready Transport provide incentives for commercial fleets to install charging infrastructure
- EV rates to make it more affordable to charge (both residential and commercial)

ELECTRIFY BUILDINGS



- Portfolio of energy efficiency programs for both residential and commercial
- Pilot with UC and CSU systems to reduce carbon emissions on their campuses
- Partnered with LADWP and SMUD to commission economic study of housing electrification costs and benefits

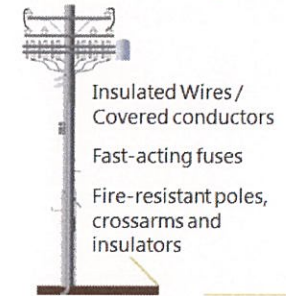
Empowering customers to make clean energy choices that best fit their needs

Wildfire: SCE's 2019 Wildfire Mitigation Plan (WMP)

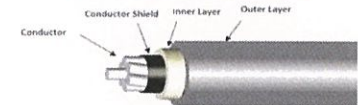
| | <u>Mitigations</u> | <u>Activities</u> |
|-----------------------|---|---|
| Operational | Inspections | <ul style="list-style-type: none"> Enhanced overhead inspections (EOI) on transmission and distribution structures in HFRA Various existing inspections (poles, switches, circuits, relays, etc.) Infrared, Corona scanning and high definition (HD) imagery |
| | Public Safety Power Shutoff (PSPS) | <ul style="list-style-type: none"> Effective communications and engagement with emergency services, customers and communities |
| | Situational Awareness | <ul style="list-style-type: none"> Weather stations and HD cameras per SCE's Grid Safety & Resiliency Program (GSRP) |
| | Vegetation Management | <ul style="list-style-type: none"> Hazard tree removal per GSRP Vegetation removal at poles LiDAR surveying for transmission, supplemental inspections in HFRA |
| Infrastructure | Covered Conductor | <ul style="list-style-type: none"> Circuit miles of covered conductor in HFRA |
| | Undergrounding | <ul style="list-style-type: none"> Evaluation of targeted undergrounding in HFRA |
| | Other Infrastructure Mitigations | <ul style="list-style-type: none"> Various system hardening activities (e.g., composite poles, current limiting fuses (CLFs), remote automatic reclosers (RARs), Fast Curve settings) Studies, evaluations and pilots of alternative technologies |

Note: Filed with the CPUC on February 6, 2019. HFRA = High Risk Fire Area.

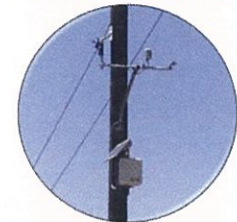
Hardened System



Covered Conductor



Weather Stations



Fire Monitoring Cameras



The WMP, required by SB 901 (Dodd, 2018), is part of a larger, ongoing effort and incorporates and builds on the \$582 million GSRP that SCE submitted to the CPUC

Wildfire: Vegetation Management

- **20+** in-house certified arborists
- **800+** pruning contractors with **60** more crews added June/July 2018
- \approx **900,000** trees inspected annually
- \approx **700,000** pruned per year; **400,000** trees in high fire risk areas

2019

- Remove dead, dying, diseased trees in HFRA (30,000 forecast for 2019)
- Remove additional 7,500 which pose a fall-in or blow-in risk to SCE electrical facilities in HFRA
- Expand vegetation clearance distance to 12 feet per CPUC recommendation



Dead, dying, diseased and certain other trees present a hazard and are removed to protect electrical facilities and reduce risk of fire.

Public Safety Power Shutoff (PSPS) Overview

- De-energization to **prevent ignitions** from powerlines
- Used during **elevated fire conditions**
- Red Flag Warning **does not** mean a PSPS will be called
- Actual frequency of PSPS events will depend on various weather and environmental factors
 - Decision will be made with most accurate assessment of real-time information and situational awareness data

Public Safety Power Shutoff (PSPS) Timeline

Ideal Timeline*

4-7 DAYS
AHEAD

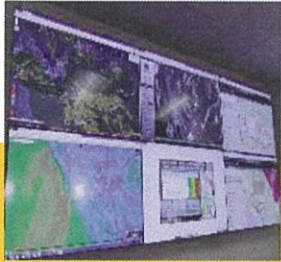
3 DAYS
AHEAD

2 DAYS
AHEAD

1 DAY
AHEAD

POWER
SHUTOFF

POWER
RESTORATION



Forecast
Weather &
Fire
Conditions

SCE Incident
Management
Team on Alert

County
Operational
Areas informed
of potential
activation

SCE Incident
Management
Team Activated

1st Notification
PSPS Possible
sent to agencies
and customers

2nd
Notification
PSPS
Possible

3rd
Notification
Power Shutoff

4th
Notification
Power
Restored

After
Inspection

PLANNING AND MONITORING

OUTAGE

*Erratic or sudden onset of conditions may impact our ability to provide advanced notice to customers.

Reliability Overview

Energy for What's AheadSM



What is Reliability?

- In simplest terms:
Having dependable electricity when you need it.
- Outages:
 - Maintenance outages (aka planned outages)
 - Repair outages (aka unplanned outages)
 - Sustained Outage = An outage lasting **> 5 minutes**
 - Momentary Outage = An outage lasting **≤ 5 minutes**



Major Event Day (MED) : A day in which the daily system SAIDI exceeds a threshold value. For the purposes of calculating daily system SAIDI, any interruption that spans multiple calendar days is accrued to the day on which the interruption began. Statistically, days having a daily system SAIDI greater than a threshold value are days on which the energy delivery system experienced stresses beyond that normally expected (such as severe weather).

How Do We Measure Reliability?

| SAIDI | SAIFI | MAIFI | CAIDI |
|--|----------|--|---|
| <p>SAIDI = Total minutes every SCE customer was without power due to sustained outages (CMI)</p> <p>System Average Interruption Duration Index</p> | <p>÷</p> | <p>Total number of customers</p> | <p>“What’s the total time my power service will be unexpectedly interrupted this year?”</p> |
| <p>SAIFI = Number of sustained customer outages experienced by all SCE customers (CI)</p> <p>System Average Interruption Frequency Duration Index</p> | <p>÷</p> | <p>Total number of customers</p> | <p>“How many times will my power service be unexpectedly interrupted this year?”</p> |
| <p>CAIDI = System Average Interruption Duration Index (SAIDI)</p> <p>Customer Average Interruption Duration Index</p> | <p>÷</p> | <p>System Average Interruption Frequency Index (SAIFI)</p> | <p>“How long will it take to restore my power after an unexpected interruption?”</p> |

Cities in the MONROVIA District

ALTADENA
ARCADIA
AZUSA
BALDWIN PARK
BRADBURY
DUARTE
EAST PASADENA
EAST SAN GABRIEL
GLENDALE
IRWINDALE
LA CANADA FLINTRIDGE
LA CRESCENTA MONTROSE
LOS ANGELES
MAYFLOWER VILLAGE
MONROVIA
PASADENA
SAN GABRIEL
SAN MARINO
SIERRA MADRE
SOUTH PASADENA
TEMPLE CITY
VINCENT
WEST PUENTE VALLEY

Reliability by SCE Districts (No Exclusions)

| District Name | 2014 | | | | 2015 | | | | 2016 | | | | 2017 | | | | 2018 | | | |
|-----------------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|
| | District SAIDI | SAIDI Ranking | District SAIFI | SAIFI Ranking | District SAIDI | SAIDI Ranking | District SAIFI | SAIFI Ranking | District SAIDI | SAIDI Ranking | District SAIFI | SAIFI Ranking | District SAIDI | SAIDI Ranking | District SAIFI | SAIFI Ranking | District SAIDI | SAIDI Ranking | District SAIFI | SAIFI Ranking |
| ANTELOPE VALLEY | 51.05 | 35 | 0.59 | 34 | 104.34 | 22 | 0.68 | 30 | 107.67 | 24 | 0.87 | 29 | 103.19 | 23 | 0.87 | 27 | 55.61 | 33 | 0.61 | 31 |
| ARROWHEAD | 193.25 | 5 | 1.59 | 5 | 362.61 | 4 | 3.97 | 1 | 659.46 | 3 | 2.85 | 5 | 816.52 | 2 | 3.86 | 3 | 68.60 | 29 | 1.53 | 5 |
| BARSTOW | 201.53 | 4 | 1.34 | 10 | 187.11 | 8 | 1.17 | 12 | 134.83 | 18 | 1.35 | 9 | 357.47 | 6 | 2.65 | 6 | 116.70 | 17 | 1.37 | 9 |
| BIG CREEK | 920.25 | 1 | 1.34 | 11 | 422.77 | 2 | 3.42 | 2 | 1062.01 | 2 | 4.99 | 1 | 4273.52 | 1 | 7.95 | 2 | 203.43 | 6 | 2.48 | 1 |
| BISHOP | 118.79 | 17 | 0.59 | 35 | 298.11 | 6 | 2.22 | 4 | 168.59 | 8 | 1.22 | 14 | 190.51 | 10 | 1.93 | 9 | 139.70 | 12 | 0.54 | 32 |
| BLYTHE | 707.54 | 2 | 2.42 | 2 | 427.00 | 1 | 1.52 | 7 | 396.38 | 5 | 2.71 | 6 | 684.48 | 3 | 2.38 | 7 | 277.72 | 3 | 1.57 | 4 |
| CATALINA | 97.02 | 24 | 4.17 | 1 | 42.56 | 35 | 2.25 | 3 | 65.01 | 35 | 3.66 | 3 | 70.67 | 34 | 0.54 | 35 | 141.45 | 11 | 2.44 | 2 |
| COVINA | 91.60 | 27 | 0.87 | 22 | 100.08 | 23 | 0.81 | 25 | 112.13 | 22 | 0.97 | 24 | 117.18 | 20 | 0.93 | 23 | 103.18 | 18 | 0.83 | 22 |
| DOMINGUEZ HILLS | 82.30 | 29 | 0.71 | 28 | 130.63 | 15 | 0.97 | 17 | 146.38 | 12 | 1.11 | 17 | 123.60 | 18 | 0.83 | 28 | 93.37 | 19 | 0.85 | 21 |
| FOOTHILL | 93.35 | 25 | 0.93 | 21 | 109.64 | 20 | 0.95 | 20 | 142.81 | 14 | 1.03 | 21 | 110.53 | 21 | 1.12 | 13 | 117.61 | 16 | 0.98 | 17 |
| FULLERTON | 82.23 | 30 | 0.72 | 27 | 76.59 | 29 | 0.67 | 31 | 92.72 | 30 | 0.76 | 34 | 89.29 | 28 | 0.68 | 33 | 69.45 | 28 | 0.52 | 33 |
| HUNTINGTON BEACH | 79.61 | 31 | 0.78 | 25 | 98.32 | 25 | 0.95 | 19 | 128.02 | 20 | 1.26 | 12 | 99.07 | 26 | 0.98 | 21 | 87.72 | 24 | 0.76 | 25 |
| KERNVILLE | 178.69 | 8 | 1.99 | 3 | 286.38 | 7 | 0.96 | 18 | 2421.32 | 1 | 3.67 | 2 | 305.53 | 7 | 3.29 | 4 | 184.41 | 7 | 1.14 | 10 |
| LONG BEACH | 66.33 | 34 | 0.61 | 32 | 164.46 | 9 | 0.89 | 23 | 135.16 | 17 | 0.86 | 31 | 77.17 | 32 | 0.71 | 32 | 51.48 | 34 | 0.44 | 34 |
| MENIFEE | 156.68 | 11 | 1.32 | 12 | 111.46 | 19 | 0.98 | 16 | 156.75 | 9 | 1.31 | 10 | 130.47 | 16 | 0.96 | 22 | 174.06 | 8 | 0.90 | 19 |
| MONROVIA | 133.32 | 14 | 1.16 | 16 | 96.68 | 26 | 0.88 | 24 | 116.57 | 21 | 0.84 | 32 | 105.00 | 22 | 0.98 | 20 | 243.02 | 5 | 1.43 | 8 |
| MONTEBELLO | 158.34 | 10 | 1.16 | 15 | 150.28 | 12 | 1.18 | 11 | 133.52 | 19 | 1.17 | 15 | 123.98 | 17 | 0.99 | 19 | 160.88 | 10 | 1.06 | 13 |
| ONTARIO | 97.91 | 23 | 1.00 | 19 | 94.04 | 27 | 0.74 | 27 | 105.07 | 27 | 0.93 | 27 | 100.43 | 24 | 1.13 | 12 | 80.04 | 26 | 0.72 | 27 |
| PALM SPRINGS | 107.04 | 20 | 0.71 | 29 | 99.54 | 24 | 0.80 | 26 | 107.58 | 25 | 1.07 | 19 | 119.10 | 19 | 1.02 | 17 | 73.95 | 27 | 0.79 | 24 |
| REDLANDS | 154.25 | 12 | 1.04 | 18 | 124.52 | 17 | 1.01 | 14 | 137.11 | 16 | 0.98 | 23 | 142.59 | 14 | 1.01 | 18 | 88.93 | 22 | 0.97 | 18 |
| RIDGECREST | 176.84 | 9 | 1.57 | 6 | 148.90 | 13 | 1.01 | 15 | 254.31 | 6 | 1.05 | 20 | 164.28 | 11 | 1.09 | 14 | 254.59 | 4 | 1.10 | 11 |
| SADDLEBACK | 99.07 | 22 | 0.74 | 26 | 46.03 | 34 | 0.39 | 35 | 65.99 | 34 | 0.65 | 35 | 65.35 | 35 | 0.58 | 34 | 45.80 | 35 | 0.38 | 35 |
| SAN JOAQUIN | 138.25 | 13 | 1.17 | 14 | 127.50 | 16 | 1.05 | 13 | 108.44 | 23 | 1.09 | 18 | 191.66 | 9 | 1.34 | 11 | 56.23 | 31 | 0.68 | 28 |
| SANTA ANA | 91.68 | 26 | 0.84 | 23 | 67.46 | 32 | 0.71 | 29 | 97.27 | 29 | 1.00 | 22 | 81.90 | 31 | 0.71 | 31 | 122.09 | 15 | 0.82 | 23 |
| SANTA BARBARA | 183.78 | 7 | 1.38 | 9 | 152.37 | 11 | 1.52 | 6 | 156.66 | 10 | 1.41 | 8 | 408.43 | 5 | 9.21 | 1 | 172.90 | 9 | 1.02 | 16 |
| SANTA MONICA | 110.76 | 19 | 0.99 | 20 | 75.41 | 30 | 0.62 | 32 | 91.08 | 31 | 0.95 | 26 | 71.89 | 33 | 0.71 | 30 | 80.24 | 25 | 1.04 | 15 |
| SOUTH BAY | 125.28 | 16 | 1.39 | 8 | 164.07 | 10 | 1.31 | 8 | 183.90 | 7 | 1.88 | 7 | 99.19 | 25 | 0.93 | 24 | 90.63 | 21 | 1.09 | 12 |
| TEHACHAPI | 130.70 | 15 | 1.29 | 13 | 298.96 | 5 | 1.21 | 9 | 97.29 | 28 | 1.13 | 16 | 86.51 | 29 | 1.05 | 16 | 55.99 | 32 | 0.67 | 29 |
| THOUSAND OAKS | 104.37 | 21 | 1.10 | 17 | 106.59 | 21 | 0.92 | 21 | 143.78 | 13 | 1.31 | 11 | 151.74 | 12 | 1.43 | 10 | 1167.54 | 1 | 1.48 | 6 |
| VALENCIA | 79.23 | 32 | 0.61 | 33 | 72.27 | 31 | 0.61 | 33 | 105.09 | 26 | 0.97 | 25 | 136.62 | 15 | 1.08 | 15 | 92.41 | 20 | 1.06 | 14 |
| VENTURA | 183.79 | 6 | 1.65 | 4 | 148.85 | 14 | 1.19 | 10 | 150.41 | 11 | 1.24 | 13 | 520.90 | 4 | 3.12 | 5 | 136.04 | 13 | 1.44 | 7 |
| VICTORVILLE | 68.85 | 33 | 0.63 | 31 | 87.03 | 28 | 0.91 | 22 | 79.35 | 33 | 0.92 | 28 | 84.07 | 30 | 0.89 | 26 | 125.92 | 14 | 0.86 | 20 |
| WHITTIER | 87.60 | 28 | 0.70 | 30 | 114.52 | 18 | 0.73 | 28 | 137.34 | 15 | 0.81 | 33 | 148.91 | 13 | 0.90 | 25 | 87.74 | 23 | 0.67 | 30 |
| WILDOMAR | 118.49 | 18 | 0.81 | 24 | 52.70 | 33 | 0.60 | 34 | 84.01 | 32 | 0.87 | 30 | 90.15 | 27 | 0.80 | 29 | 60.77 | 30 | 0.75 | 26 |
| YUCCA VALLEY | 304.25 | 3 | 1.49 | 7 | 389.08 | 3 | 1.80 | 5 | 463.68 | 4 | 3.39 | 4 | 300.33 | 8 | 1.96 | 8 | 353.83 | 2 | 1.94 | 3 |
| SCE SystemWide | 112.10 | | 0.97 | | 114.83 | | 0.92 | | 134.48 | | 1.10 | | 139.73 | | 1.19 | | 136.82 | | 0.87 | |

Exclusions are days which utilities are allowed to remove from their metrics because the outages on those days were caused by a severe acts of nature.

**In the columns showing "Rank," lower numbers indicate poorer performance.

Overview of South Pasadena

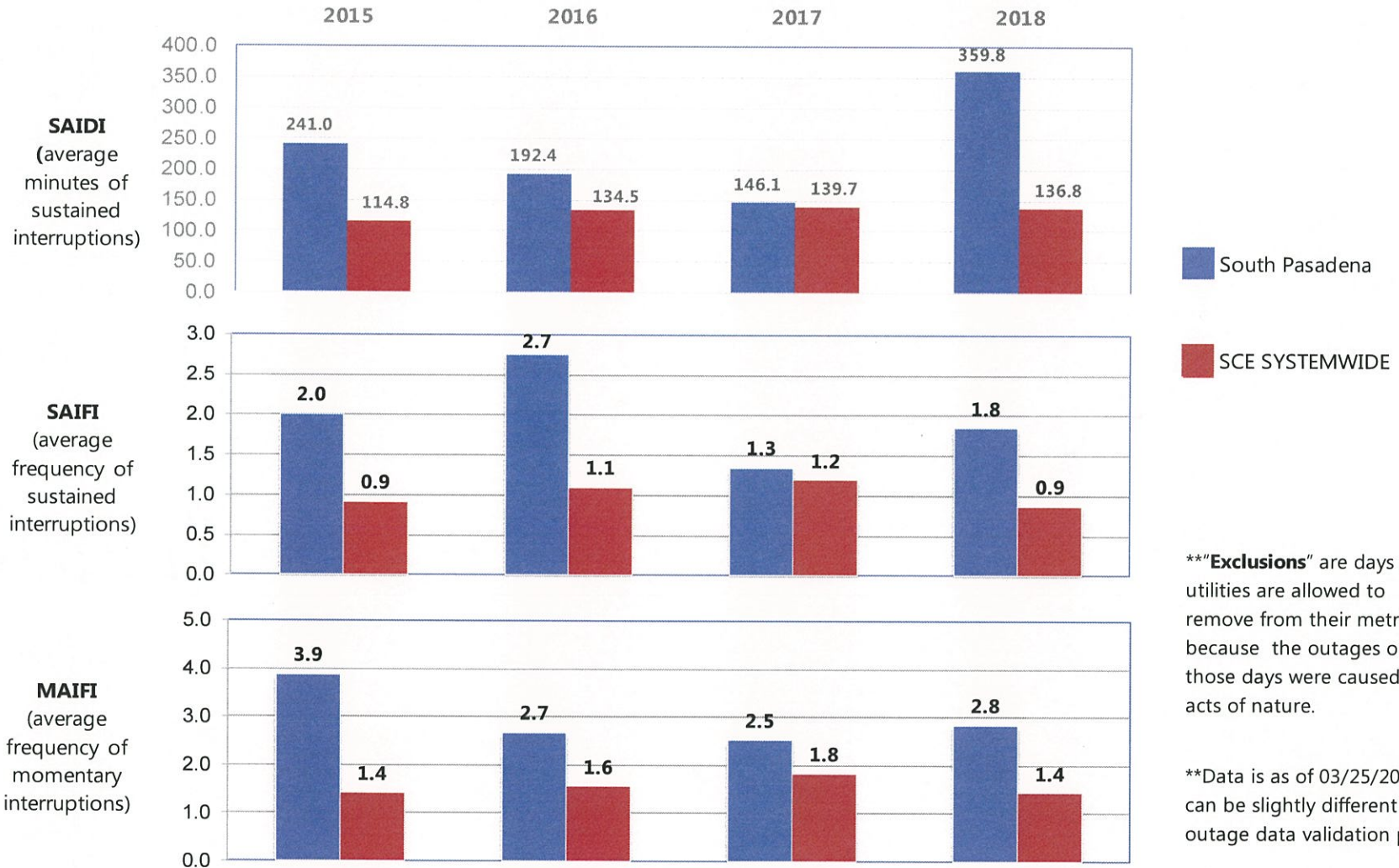
There are 14 circuits that serve South Pasadena

1

| Circuit Type | Customers | Circuit Type | Customers | Circuit Type | Customers | Circuit Type | Customers |
|-------------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|
| ASTEROID(16KV) | 4,489 | | | | | | |
| BRENT(4.16KV) | 805 | | | | | | |
| CAWSTON(4.16KV) | 275 | | | | | | |
| EL CENTRO(4.16KV) | 382 | | | | | | |
| FREMONT(4.16KV) | 454 | | | | | | |
| GRAVES(4.16KV) | 315 | | | | | | |
| GREVELIA(4.16KV) | 380 | | | | | | |
| HILLTOP(4.16KV) | 134 | | | | | | |
| HOOVER(4.16KV) | 264 | | | | | | |
| MARENGO(4.16KV) | 189 | | | | | | |
| OXLEY(4.16KV) | 387 | | | | | | |
| ST. CHARLES(16KV) | 1,185 | | | | | | |
| TEST(16KV) | 3,937 | | | | | | |
| TRI CITY(16KV) | 2,569 | | | | | | |

Grand Total 15,765

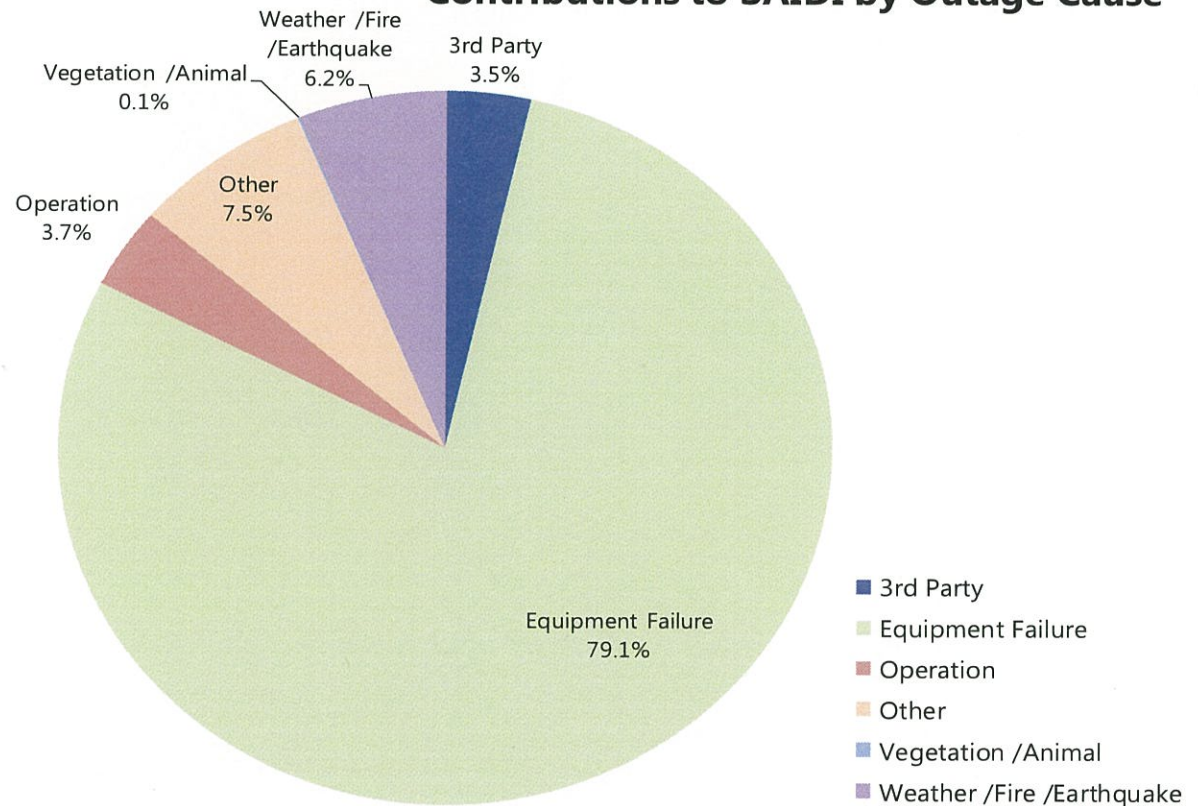
Reliability History of Circuits Serving South Pasadena (No Exclusions)



Causes of Repair Outages in South Pasadena 2018

Contributions to SAIDI by Outage Cause

- **Equipment Failure**
e.g., in-service failure of transformer, switch, or conductors
- **Vegetation/Animal**
e.g., tree branch, rodent, or bird causing a short circuit between conductors
- **Other**
e.g., patrolled but no cause found, PSPS
- **Operations**
e.g., urgent maintenance w/o 3-day notice
- **3rd Party**
e.g., balloon, car hit pole, dig-in

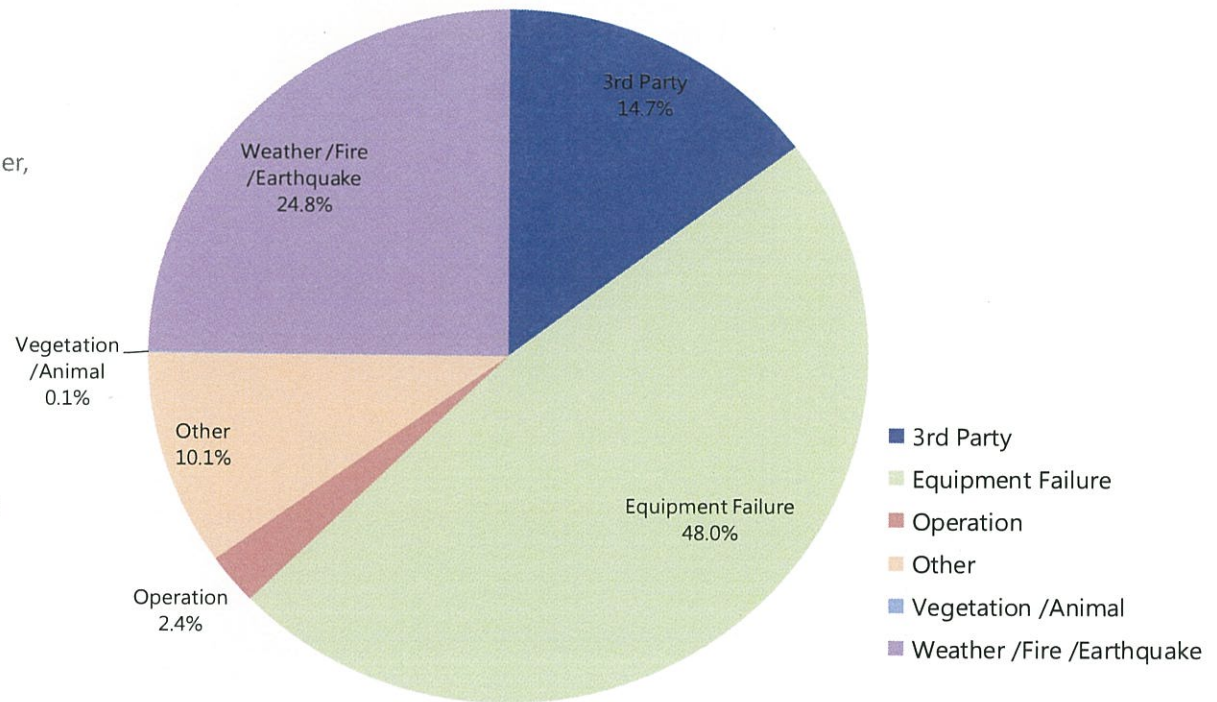


SAIDI = the cumulative amount of time the average customer is interrupted by “sustained” outages each year.

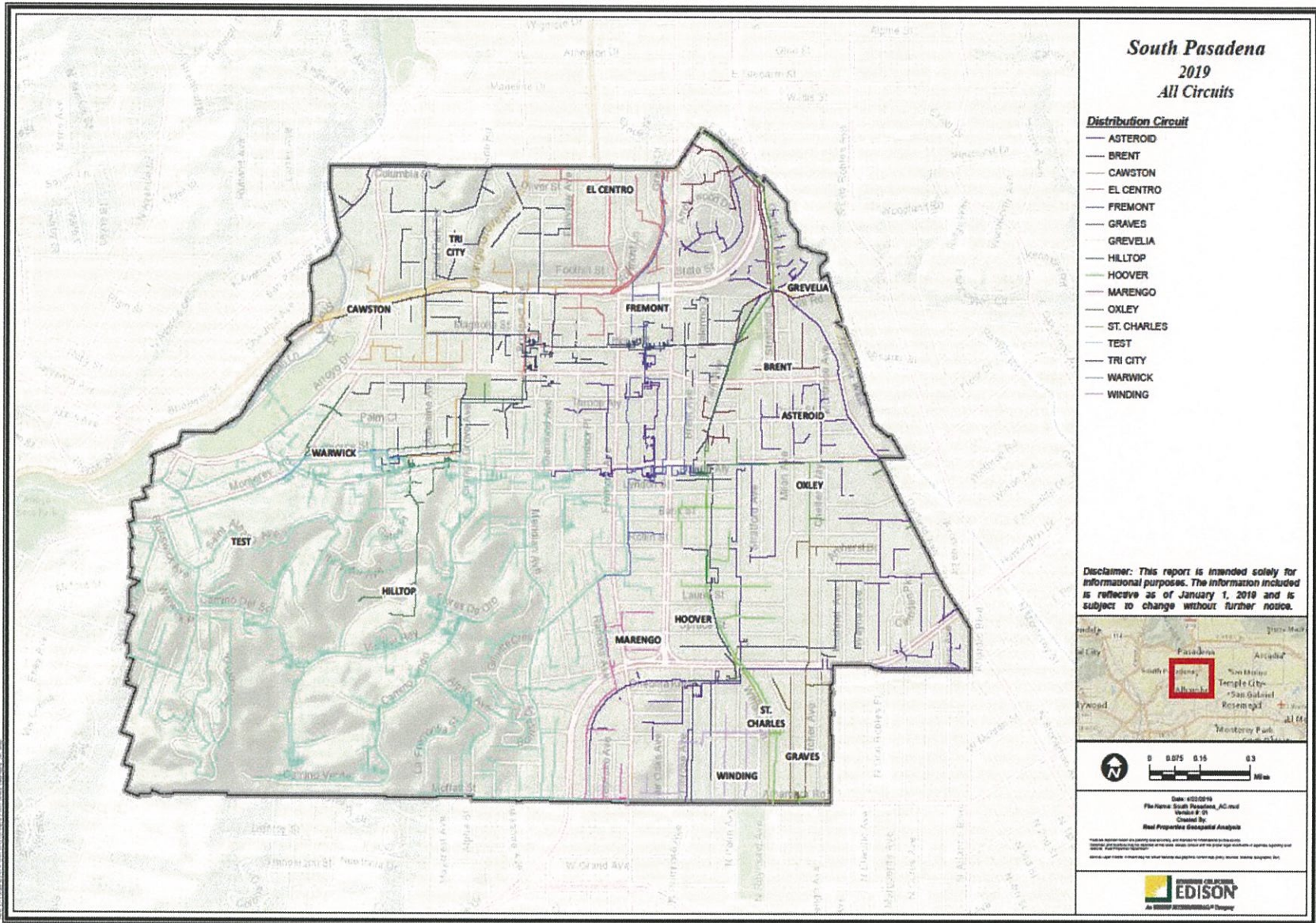
Causes of Repair Outages in South Pasadena 2018

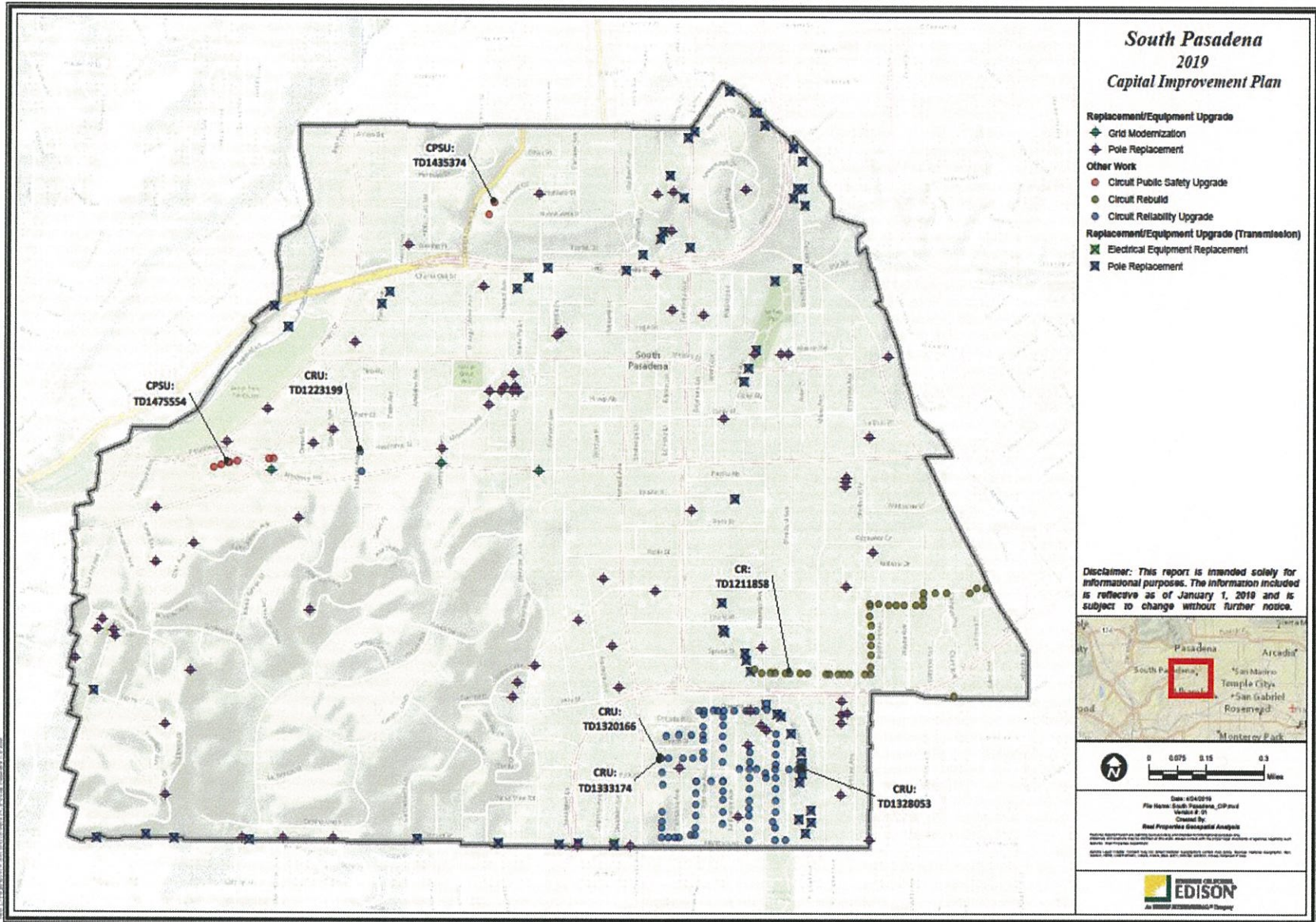
Contributions to SAIFI by Outage Cause

- **Equipment Failure**
e.g., in-service failure of transformer, switch, or conductors
- **Vegetation/Animal**
e.g., tree branch, rodent, or bird causing a short circuit between conductors
- **Other**
e.g., patrolled but no cause found, PSPS
- **Operations**
e.g., urgent maintenance w/o 3-day notice
- **3rd Party**
e.g., balloon, car hit pole, dig-in



SAIFI = the number of times the average customer is interrupted by "sustained" outages each year





Back-up Slides

Reliability Histories of Circuits Serving South Pasadena

Updated through Dec 2018

Energy for What's AheadSM



Average Reliability of 14 Circuits Serving South Pasadena

| | 2015 | | | 2016 | | | 2017 | | | 1st Qtr 2018 | | | 2nd Qtr 2018 | | | 3rd Qtr 2018 | | | 4th Qtr 2018 | | | 2018 | | |
|--|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|
| | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI |
| 14 Circuits Serving South Pasadena -- Total | | | | | | | | | | | | | | | | | | | | | | | | |
| Customers: 15,765 | 241.0 | 2.0 | 3.9 | 192.4 | 2.7 | 2.7 | 146.1 | 1.3 | 2.5 | 56.0 | 0.6 | 0.4 | 19.1 | 0.3 | 0.5 | 72.7 | 0.6 | 0.9 | 212.0 | 0.4 | 1.0 | 359.8 | 1.8 | 2.8 |
| 3rd Party | 9% | 7% | 0% | 38% | 29% | - | 1% | 1% | 4% | - | - | - | 0% | 0% | 8% | 17% | 43% | - | - | - | - | 4% | 15% | 1% |
| Equipment Failure | 40% | 40% | 11% | 27% | 41% | 28% | 56% | 47% | 5% | 42% | 56% | - | 93% | 85% | 51% | 49% | 6% | - | 98% | 79% | 46% | 79% | 48% | 25% |
| Operation | 3% | 3% | 1% | 12% | 16% | - | 4% | 9% | 2% | 4% | 3% | - | - | - | - | 15% | 4% | 4% | 0% | 0% | - | 4% | 2% | 1% |
| Other | 8% | 16% | 16% | - | - | 24% | 3% | 1% | 38% | 40% | 18% | 62% | 6% | 13% | 40% | 5% | 4% | - | 0% | 7% | 28% | 7% | 10% | 27% |
| Vegetation/Animal | 2% | 6% | 47% | 10% | 10% | 29% | 1% | 0% | 36% | - | - | - | 0% | 0% | - | - | - | 67% | 0% | 0% | 25% | 0% | 0% | 30% |
| Weather/Fire/Earthquake | 38% | 27% | 25% | 13% | 4% | 18% | 34% | 43% | 15% | 15% | 23% | 38% | 1% | 1% | - | 13% | 43% | 29% | 2% | 14% | - | 6% | 25% | 15% |
| SCE SYSTEMWIDE | 114.8 | 0.9 | 1.4 | 134.5 | 1.1 | 1.6 | 139.7 | 1.2 | 1.8 | 19.7 | 0.2 | 0.3 | 16.7 | 0.2 | 0.4 | 28.4 | 0.2 | 0.3 | 72.0 | 0.3 | 0.4 | 136.8 | 0.9 | 1.4 |

Notes:

No outages are excluded from the metrics.

Outage Causes:

Other: e.g., patrolled but no cause could be found

Operations: e.g., urgent maintenance w/o 3-day notice to customers

3rd Party: e.g., balloons, car hit pole, dig-in

Vegetation/Animal: e.g., tree branch, rodent, or bird causing short circuit across conductors

SAIDI (minutes) = the cumulative amount of time the average customer is interrupted by "sustained" (longer than 5 minutes) outages.

SAIFI (interruptions) = the number of times the average customer is interrupted by "sustained" outages.

MAIFI (interruptions) = the number of times the average customer is interrupted by "momentary" (lasting 5 minutes or less) outages.

Reliability Histories for Individual Circuits Serving South Pasadena - 1 of 4

| | 2015 | | | 2016 | | | 2017 | | | 1st Qtr 2018 | | | 2nd Qtr 2018 | | | 3rd Qtr 2018 | | | 4th Qtr 2018 | | | 2018 | | |
|---|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|
| | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI |
| ASTEROID(16KV) - Customers: 4,489 | 316.6 | 3.3 | 5.7 | 300.0 | 5.0 | 4.0 | 108.3 | 2.1 | 5.0 | 72.6 | 1.0 | 1.0 | 27.1 | 0.3 | 1.0 | 147.0 | 2.0 | 2.0 | 744.3 | 1.0 | 2.0 | 991.0 | 4.4 | 6.0 |
| 3rd Party | - | - | - | 49% | 40% | - | - | - | - | - | - | - | - | - | - | 31% | 48% | - | - | - | - | 5% | 23% | - |
| Equipment Failure | 90% | 64% | 12% | 27% | 40% | 25% | 90% | 51% | - | 99% | 100% | - | 100% | 100% | 100% | 45% | 4% | - | 100% | 100% | 50% | 92% | 55% | 33% |
| Operation | 1% | 4% | - | 18% | 20% | - | 3% | 1% | - | 1% | 0% | - | - | - | - | - | - | - | - | - | - | 0% | 0% | - |
| Other | - | - | - | - | - | 25% | - | - | 40% | - | - | 100% | - | - | - | - | - | - | - | - | 50% | - | - | 33% |
| Vegetation/Animal | 2% | 1% | 71% | 0% | 0% | 25% | 0% | 0% | 40% | - | - | - | - | - | - | - | - | 51% | - | - | - | - | - | 17% |
| Weather/Fire/Earthquake | 7% | 31% | 17% | 6% | 0% | 25% | 7% | 48% | 20% | - | - | - | - | - | - | 24% | 48% | 49% | - | - | - | 4% | 23% | 16% |
| BRENT(4.16KV) - Customers: 805 | - | - | - | 222.3 | 2.0 | - | 144.9 | 1.0 | - | - | - | - | - | - | - | - | - | - | 82.5 | 1.0 | - | 82.5 | 1.0 | - |
| 3rd Party | - | - | - | 35% | 50% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | - | - | - | - | - | - | 100% | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operation | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Vegetation/Animal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | - | - | - | 65% | 50% | - | - | - | - | - | - | - | - | - | - | - | - | - | 100% | 100% | - | 100% | 100% | - |
| CAWSTON(4.16KV) - Customers: 275 | 74.5 | 0.1 | 4.9 | 302.9 | 1.1 | - | 790.3 | 2.0 | 1.0 | 0.8 | 0.0 | - | 33.9 | 0.1 | 1.2 | - | - | - | - | - | - | 34.6 | 0.1 | 1.2 |
| 3rd Party | - | - | - | - | - | - | - | - | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | - | - | - | 14% | 7% | - | 18% | 50% | - | - | - | - | 92% | 72% | - | - | - | - | - | - | - | 90% | 60% | - |
| Operation | - | - | 20% | - | - | - | - | - | - | 100% | 100% | - | - | - | - | - | - | - | - | - | - | 2% | 16% | - |
| Other | - | - | 20% | - | - | - | - | - | - | - | - | - | - | - | 100% | - | - | - | - | - | - | - | - | 100% |
| Vegetation/Animal | - | - | - | - | - | - | - | - | - | - | - | - | 8% | 28% | - | - | - | - | - | - | - | 8% | 24% | - |
| Weather/Fire/Earthquake | 100% | 100% | 59% | 86% | 93% | - | 82% | 50% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| EL CENTRO(4.16KV) - Customers: 382 | 23.9 | 0.0 | - | - | - | - | 188.0 | 1.0 | 1.0 | - | - | - | - | - | - | - | - | - | 9.8 | 1.0 | - | 9.8 | 1.0 | - |
| 3rd Party | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | - | - | - | - | - | - | 72% | 94% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operation | - | - | - | - | - | - | 28% | 6% | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100% | 100% | - | 100% | 100% | - |
| Vegetation/Animal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | 100% | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Reliability Histories for Individual Circuits Serving South Pasadena - 2 of 4

| | 2015 | | | 2016 | | | 2017 | | | 1st Qtr 2018 | | | 2nd Qtr 2018 | | | 3rd Qtr 2018 | | | 4th Qtr 2018 | | | 2018 | | |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|-------|-------|--------------|-------|-------|--------------|-------|-------|--------------|-------|-------|-------|-------|-------|
| | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI |
| FREMONT(4.16KV) - Customers: 454 | - | - | 0.2 | - | - | 4.0 | 138.9 | 1.0 | 1.0 | - | - | - | - | - | 1.0 | - | - | - | 0.8 | 0.0 | - | 0.8 | 0.0 | 1.0 |
| 3rd Party | - | - | - | - | - | - | - | - | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | - | - | - | - | - | - | 100% | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operation | - | - | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100% | 100% | - | 100% | 100% | - |
| Other | - | - | - | - | - | - | - | - | - | - | - | - | - | 100% | - | - | - | - | - | - | - | - | - | 100% |
| Vegetation/Animal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | - | - | - | - | - | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GRAVES(4.16KV) - Customers: 315 | - | - | 2.0 | 20.0 | 1.0 | 1.0 | 13.4 | 0.0 | 1.0 | 287.8 | 2.9 | - | 27.0 | 1.0 | - | - | - | - | - | - | - | 314.8 | 3.9 | - |
| 3rd Party | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | - | - | - | 100% | 100% | - | 100% | 100% | - | 70% | 92% | - | - | - | - | - | - | - | - | - | - | 64% | 69% | - |
| Operation | - | - | - | - | - | - | - | - | - | 30% | 8% | - | - | - | - | - | - | - | - | - | - | 28% | 6% | - |
| Other | - | - | 100% | - | - | 100% | - | - | - | - | - | - | 100% | 100% | - | - | - | - | - | - | - | 9% | 25% | - |
| Vegetation/Animal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | - | - | - | - | - | - | - | - | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GREVELIA(4.16KV) - Customers: 380 | 73.0 | 1.0 | - | 124.9 | 1.0 | 1.0 | 168.0 | 1.1 | - | - | - | - | 0.6 | 0.0 | - | 138.2 | 1.0 | - | - | - | - | 138.8 | 1.0 | - |
| 3rd Party | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | 100% | 100% | - | 31% | 3% | - | 82% | 92% | - | - | - | - | 100% | 100% | - | - | - | - | - | - | - | 0% | 2% | - |
| Operation | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | 100% | 18% | 8% | - | - | - | - | - | - | - | 100% | 100% | - | - | - | - | 100% | 98% | - |
| Vegetation/Animal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | - | - | - | 69% | 97% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| HILLTOP(4.16KV) - Customers: 134 | 212.0 | 3.0 | 6.0 | 148.6 | 2.0 | 1.0 | 158.0 | 1.3 | 4.0 | - | - | - | - | - | - | - | - | 1.1 | - | - | 0.6 | - | - | 1.7 |
| 3rd Party | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | - | - | 17% | 36% | 50% | - | 24% | 14% | 25% | - | - | - | - | - | - | - | - | - | - | - | 100% | - | - | 37% |
| Operation | - | - | - | 1% | 1% | - | 7% | 7% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other | 100% | 100% | 33% | - | - | - | - | - | 25% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Vegetation/Animal | - | - | 50% | 63% | 49% | 100% | - | - | 25% | - | - | - | - | - | - | - | - | 100% | - | - | - | - | - | 63% |
| Weather/Fire/Earthquake | - | - | - | - | - | - | 69% | 79% | 25% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Reliability Histories for Individual Circuits Serving South Pasadena - 3 of 4

| | 2015 | | | 2016 | | | 2017 | | | 1st Qtr 2018 | | | 2nd Qtr 2018 | | | 3rd Qtr 2018 | | | 4th Qtr 2018 | | | 2018 | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|-------|-------|--------------|-------|-------|--------------|-------|-------|--------------|-------|-------|-------|-------|-------|
| | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI |
| HOOVER(4.16KV) - Customers: 264 | - | - | 2.0 | 104.5 | 1.2 | 0.8 | 21.8 | 0.0 | 1.0 | 689.6 | 2.4 | - | 36.0 | 1.1 | - | - | - | - | - | - | - | 725.6 | 3.4 | - |
| 3rd Party | - | - | 50% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | - | - | - | 19% | 86% | - | 87% | 75% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operation | - | - | - | - | - | - | 13% | 25% | 100% | 1% | 30% | - | - | - | - | - | - | - | - | - | - | 1% | 21% | - |
| Other | - | - | 50% | - | - | - | - | - | - | 99% | 70% | - | 100% | 100% | - | - | - | - | - | - | - | 99% | 79% | - |
| Vegetation/Animal | - | - | - | 81% | 14% | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MARENGO(4.16KV) - Customers: 189 | 190.8 | 0.3 | 2.0 | 133.7 | 0.2 | 1.0 | 0.8 | 0.0 | 5.0 | - | - | - | 1.5 | 0.0 | 1.8 | - | - | - | - | - | - | 1.5 | 0.0 | 1.8 |
| 3rd Party | - | - | - | - | - | - | - | - | 20% | - | - | - | 100% | 100% | 100% | - | - | - | - | - | - | 100% | 100% | 100% |
| Equipment Failure | 30% | 28% | - | 77% | 70% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operation | 0% | 4% | - | 5% | 20% | - | 100% | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other | 70% | 68% | 100% | - | - | - | - | - | 60% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Vegetation/Animal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | - | - | - | 18% | 10% | 100% | - | - | 20% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| OXLEY(4.16KV) - Customers: 387 | 108.1 | 0.5 | - | - | - | 2.0 | 139.0 | 1.0 | - | - | - | - | - | - | - | 412.6 | 0.4 | 1.0 | - | - | - | 412.6 | 0.4 | 1.0 |
| 3rd Party | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | 48% | 31% | - | - | - | - | 100% | 100% | - | - | - | - | - | - | - | 100% | 100% | - | - | - | - | 100% | 100% | - |
| Operation | 8% | 30% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100% | - | - | - | - | - | 100% |
| Other | 44% | 39% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Vegetation/Animal | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | - | - | - | - | - | 100% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ST. CHARLES(16KV) - Customers: 1,185 | - | - | 3.0 | 94.2 | 2.2 | 4.0 | - | - | - | 155.1 | 1.0 | - | - | - | - | - | - | - | - | - | - | 155.1 | 1.0 | - |
| 3rd Party | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | - | - | - | 21% | 47% | 50% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operation | - | - | - | 60% | 7% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other | - | - | 67% | - | - | - | - | - | - | 100% | 100% | - | - | - | - | - | - | - | - | - | - | 100% | 100% | - |
| Vegetation/Animal | - | - | 33% | 19% | 46% | 50% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Weather/Fire/Earthquake | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Reliability Histories for Individual Circuits Serving South Pasadena - 4 of 4

| | 2015 | | | 2016 | | | 2017 | | | 1st Qtr 2018 | | | 2nd Qtr 2018 | | | 3rd Qtr 2018 | | | 4th Qtr 2018 | | | 2018 | | |
|--|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|
| | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI | SAIDI | SAIFI | MAIFI |
| TEST(16KV) - Customers: 3,937 | 551.5 | 3.7 | 7.5 | 179.7 | 1.7 | 3.5 | 270.7 | 2.4 | 2.4 | 25.3 | 0.4 | 0.3 | 4.0 | 0.0 | - | 6.3 | 0.0 | - | 13.8 | 0.0 | 1.0 | 49.5 | 0.5 | 1.4 |
| 3rd Party | - | - | - | 83% | 60% | - | 3% | 2% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | 11% | 28% | 13% | 12% | 38% | 28% | 49% | 30% | 17% | - | - | - | 100% | 100% | - | 100% | 100% | - | 92% | 85% | - | 46% | 5% | - |
| Operation | 7% | 3% | - | 5% | 3% | - | 7% | 24% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other | 1% | 15% | 13% | - | - | 28% | 6% | 0% | 41% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Vegetation/Animal | 4% | 16% | 33% | - | - | 44% | 2% | 1% | 41% | - | - | - | - | - | - | - | - | - | 8% | 15% | 100% | 2% | 1% | 75% |
| Weather/Fire/Earthquake | 78% | 38% | 41% | - | - | - | 33% | 44% | - | 100% | 100% | 100% | - | - | - | - | - | - | - | - | - | 51% | 94% | 25% |
| TRI CITY(16KV) - Customers: 2,569 | 168.2 | 1.6 | 0.5 | 202.2 | 4.0 | 2.0 | 31.2 | 0.2 | 1.4 | 13.3 | 0.2 | 0.5 | 56.6 | 1.0 | 1.0 | 113.2 | 0.2 | 2.1 | - | - | 1.1 | 183.1 | 1.4 | 4.6 |
| 3rd Party | 93% | 64% | 3% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Equipment Failure | 2% | 0% | - | 53% | 51% | 50% | 23% | 3% | - | - | - | - | 97% | 98% | - | 36% | 13% | - | - | - | 100% | 52% | 74% | 23% |
| Operation | - | - | - | 4% | 24% | - | 0% | 0% | - | - | - | - | - | - | - | 64% | 87% | 4% | - | - | - | 40% | 12% | 2% |
| Other | 5% | 35% | - | - | - | 50% | 6% | 11% | 26% | - | - | - | - | - | 100% | - | - | - | - | - | - | - | - | 21% |
| Vegetation/Animal | - | - | 97% | 43% | 25% | - | - | - | 74% | - | - | - | - | - | - | - | - | 96% | - | - | - | - | - | 43% |
| Weather/Fire/Earthquake | - | - | - | - | - | - | 70% | 85% | - | 100% | 100% | 100% | 3% | 2% | - | - | - | - | - | - | - | 8% | 14% | 11% |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |