

# DAWG: CED 2019 Preliminary Forecast

---

## Summary of Planning Area Forecasts



[Cary.Garcia@energy.ca.gov](mailto:Cary.Garcia@energy.ca.gov)

August 1, 2019

California Energy Commission



# Electricity Planning Areas

- Pacific Gas & Electric (PG&E)
- Southern California Edison (SCE)
- San Diego Gas & Electric (SDG&E)
- Sacramento Metropolitan Utility District (SMUD)
- Los Angeles Department of Water and Power (LADWP)



# Planning Area Results

**SMUD**



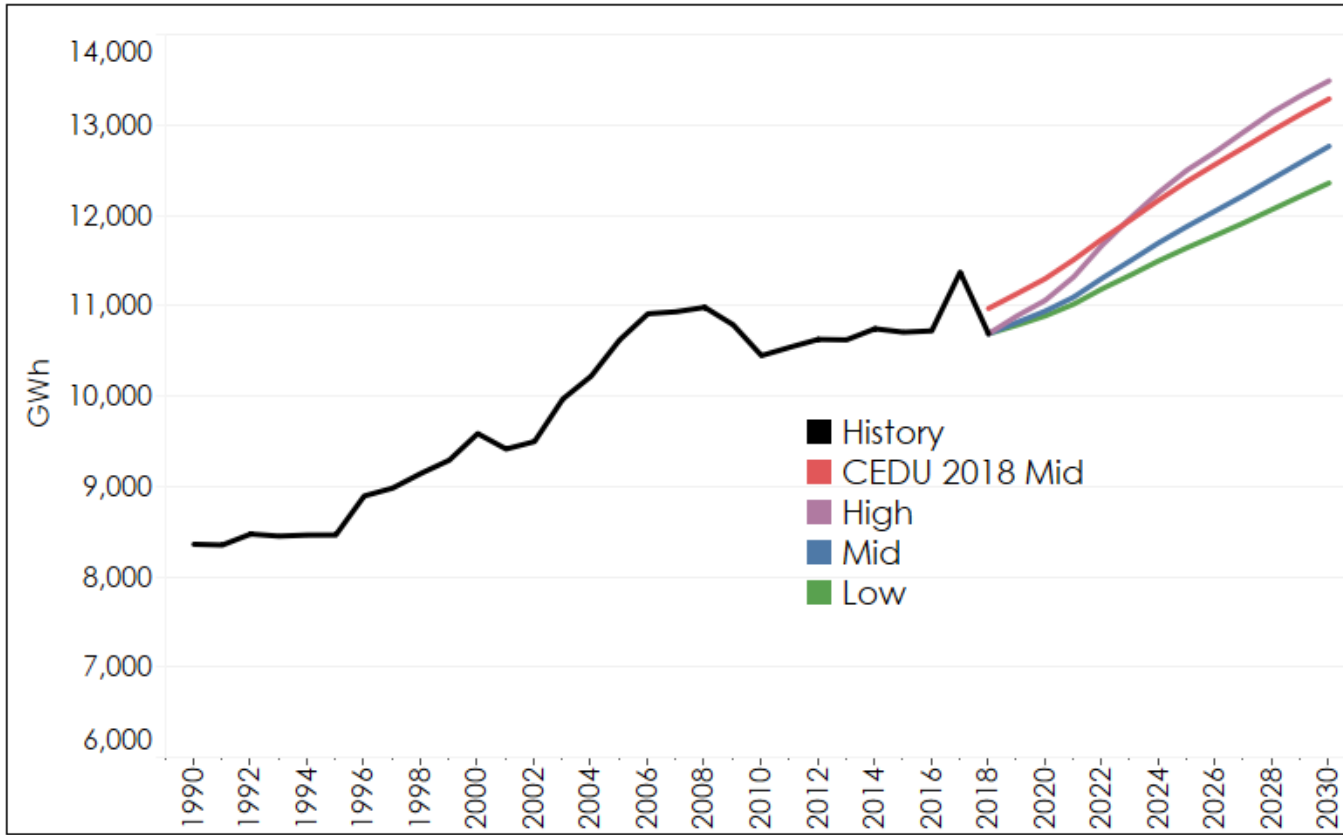
# SMUD: Summary

## Annual Average Growth in Mid Case Drivers, 2019 – 2030

- Population: 1.1%
- Households: 1.1%
- Personal Income: 2.5%
- Manufacturing Output: 2.18%
- Commercial Employment: 0.6%
- Slower growth in residential and TCU sector consumption
- 480 GWh of light-duty EV consumption in mid cases by 2030 (120,000 EVs)
- 660 MW of PV capacity in mid case by 2030



# SMUD: Consumption



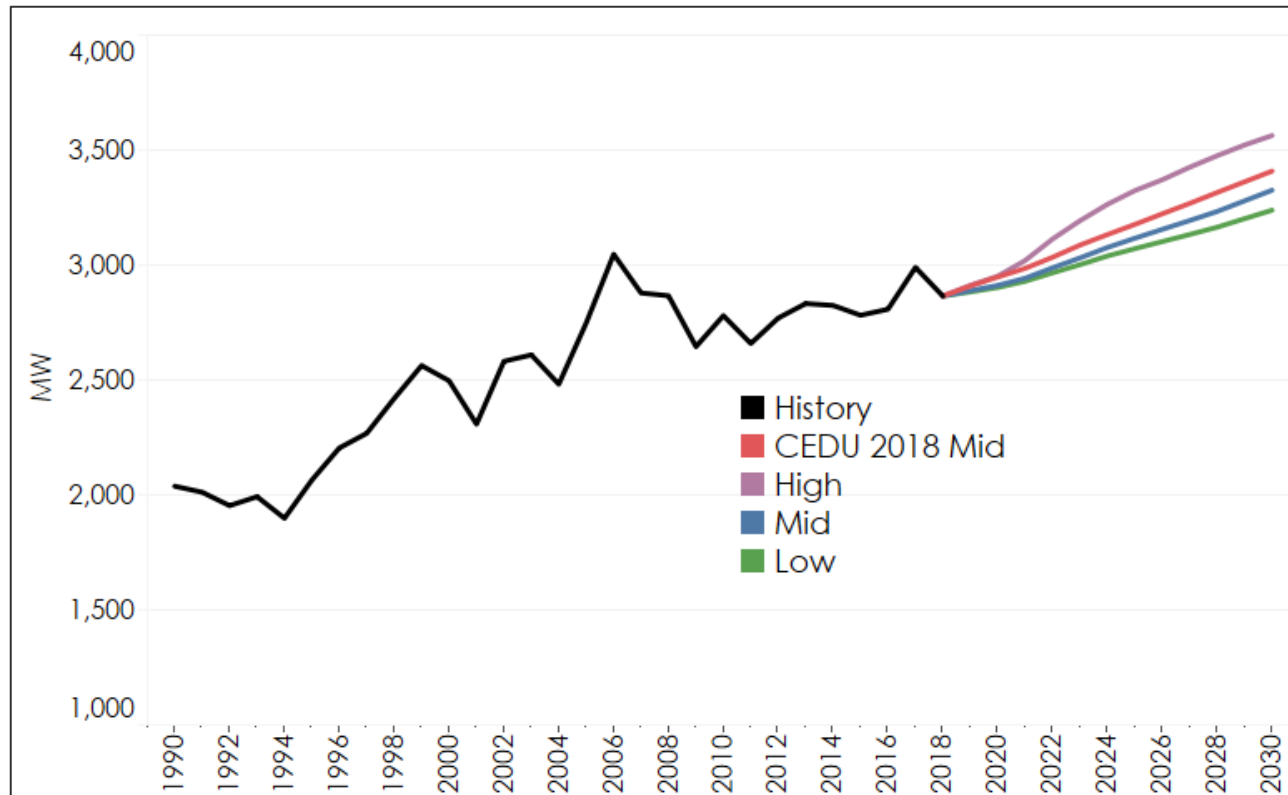
## Average Growth, 2019 – 2030

- Mid: 1.5% (1.6% - CEDU 2018)
- High: 2%
- Low: 1.25%

- New building and appliance standards reduce residential sector electricity demand
- TCU sector demand declines due to historic trend in telecommunications electricity usage



# SMUD: Peak End Use Load

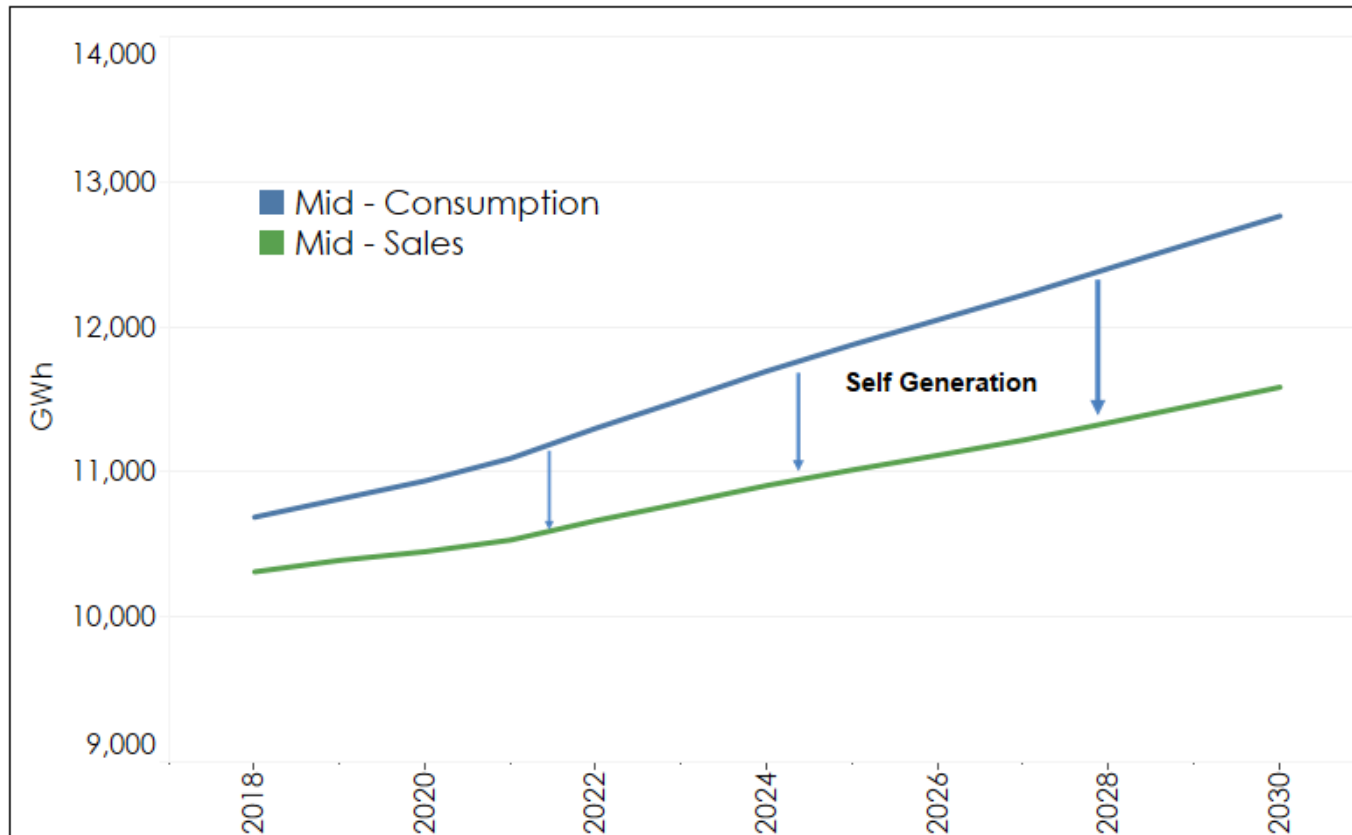


## Average Growth, 2019 – 2030

- Mid: 1.3% (1.5% - CEDU 2018)
  - High: 2%
  - Low: 1.1%
- Small decline in peak end use load driven by slower growth residential consumption



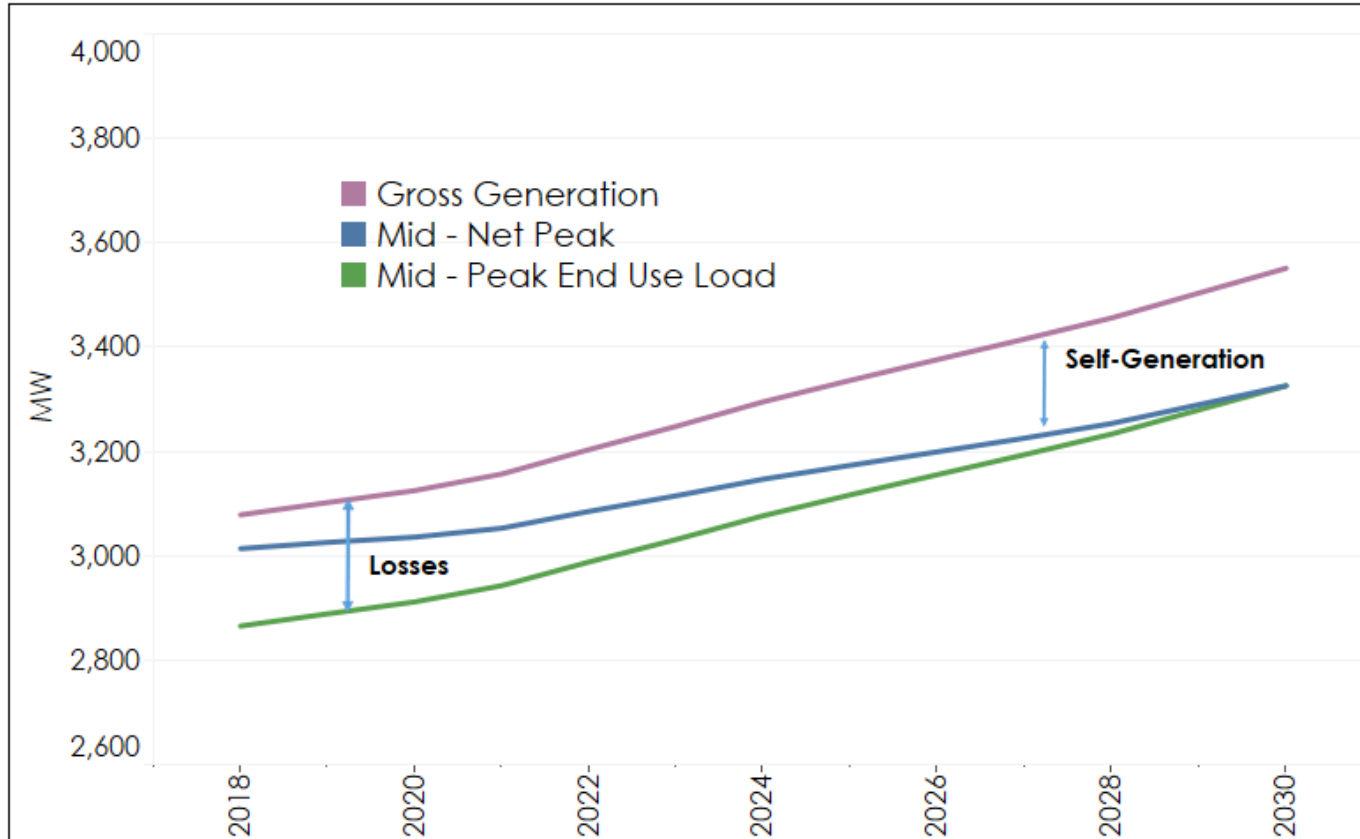
# SMUD: Consumption to Sales



- 1% average growth in sales from 2019 – 2030
- 1,180 GWh of self-generation by 2030
- 96% of self-gen is PV
- PV growth results in slower growth in sales in comparison to consumption



# SMUD: End Use Load to Peak



- Net peak grows at an average rate of 1%, 2019-2030
- 220 MW of PV at peak in 2030
- Increasing self-generation impacts result in declining net peak relative to end use load





# Planning Area Results

**LADWP**



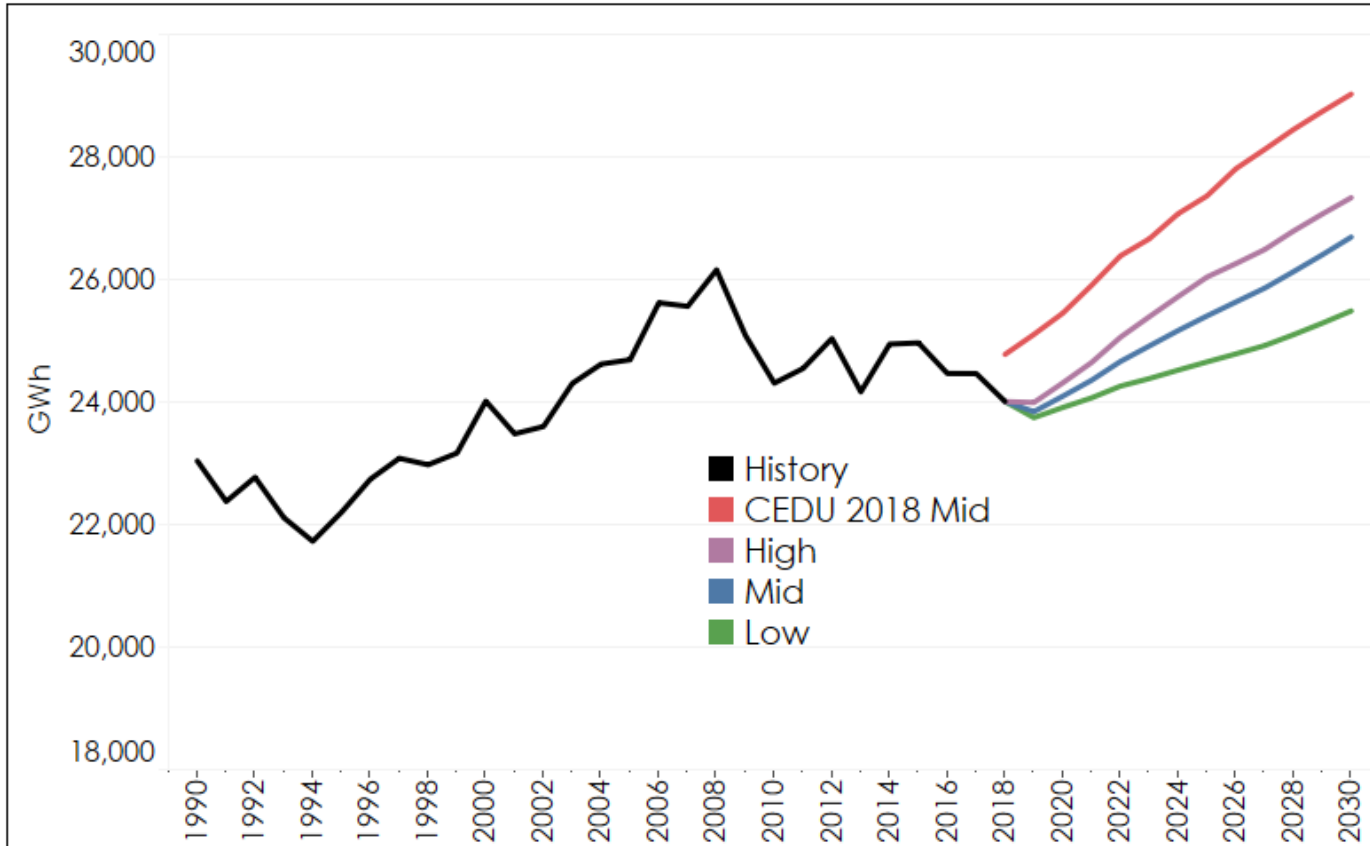
# LADWP: Summary

## Annual Average Growth in Mid Case Drivers, 2019 – 2030

- Population: 0.4%
- Households: 0.7%
- Personal Income: 2%
- Manufacturing Output: 2.0%
- Commercial Employment: 0.4%
- Residential and commercial sectors grow slower than CEDU 2018
- Declining industrial/mining sector demand
- 1,600 GWh of light-duty EV consumption in mid case by 2030 (370,000 EVs)



# LADWP: Consumption



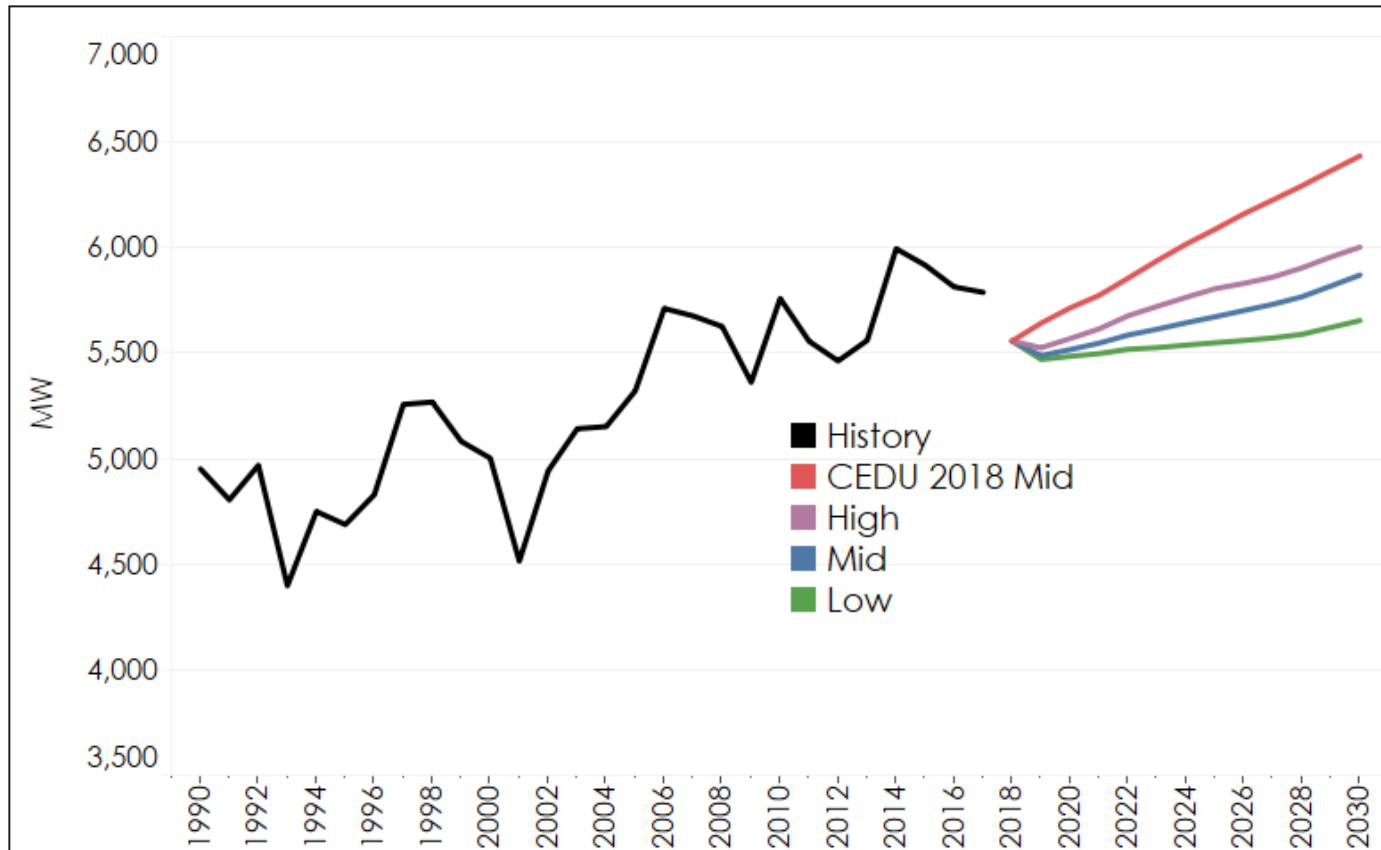
## Average Growth, 2019 – 2030

- Mid: 0.9% (1.3% - CEDU 2018)
- High: 1.1%
- Low: 0.5%

- Residential and commercial consumption slowed due to standards and economic drivers
- Industrial/mining declining faster than CEDU 2018



# LADWP: Peak End Use Load

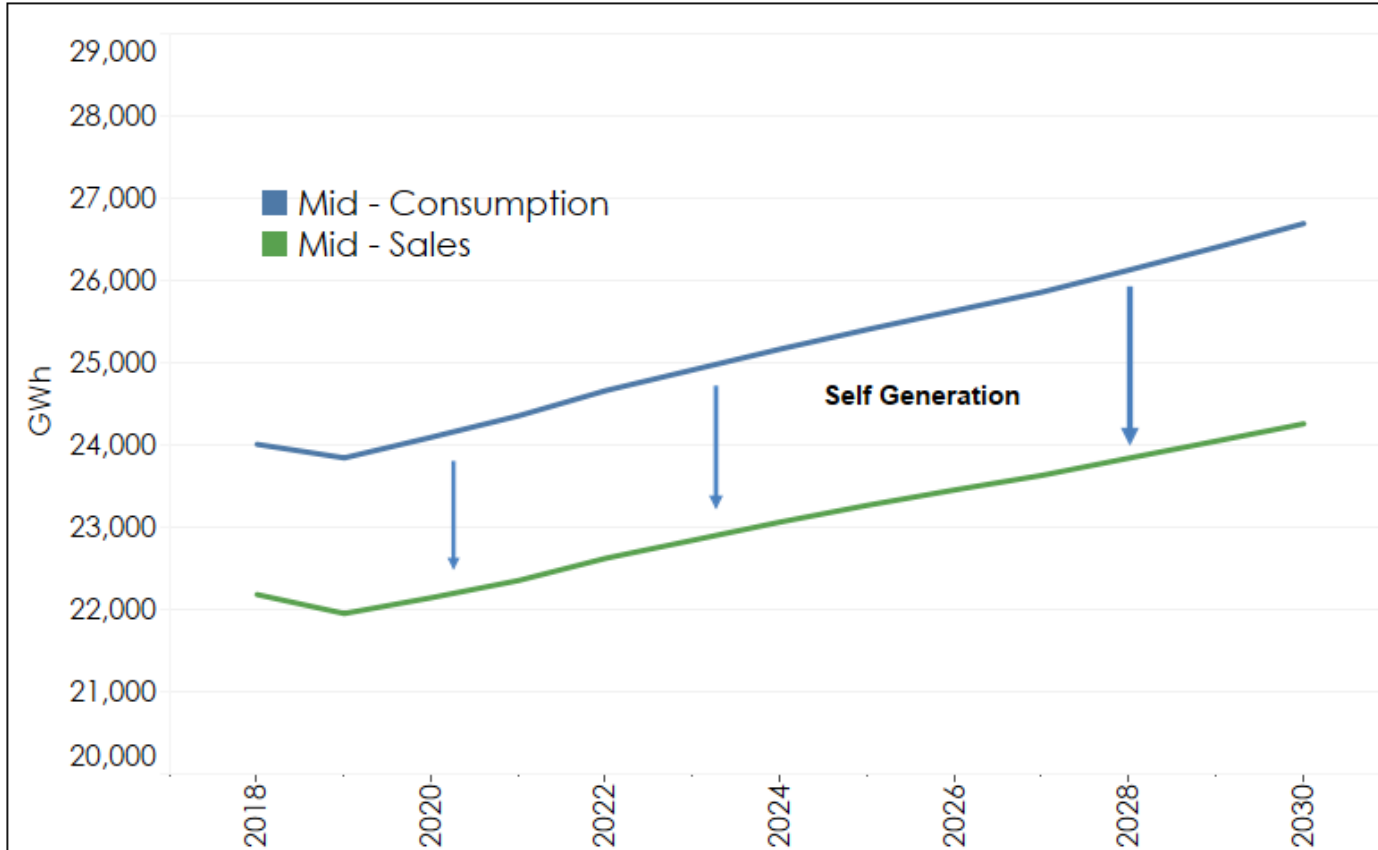


## Average Growth, 2019 – 2030

- Mid: 0.6% (1.2% - CEDU 2018)
  - High: 0.8%
  - Low: 0.3%
- Weather sensitive sectors will drive peak end use load
  - Lower residential and commercial sector consumption leads to reduced peak end use load growth



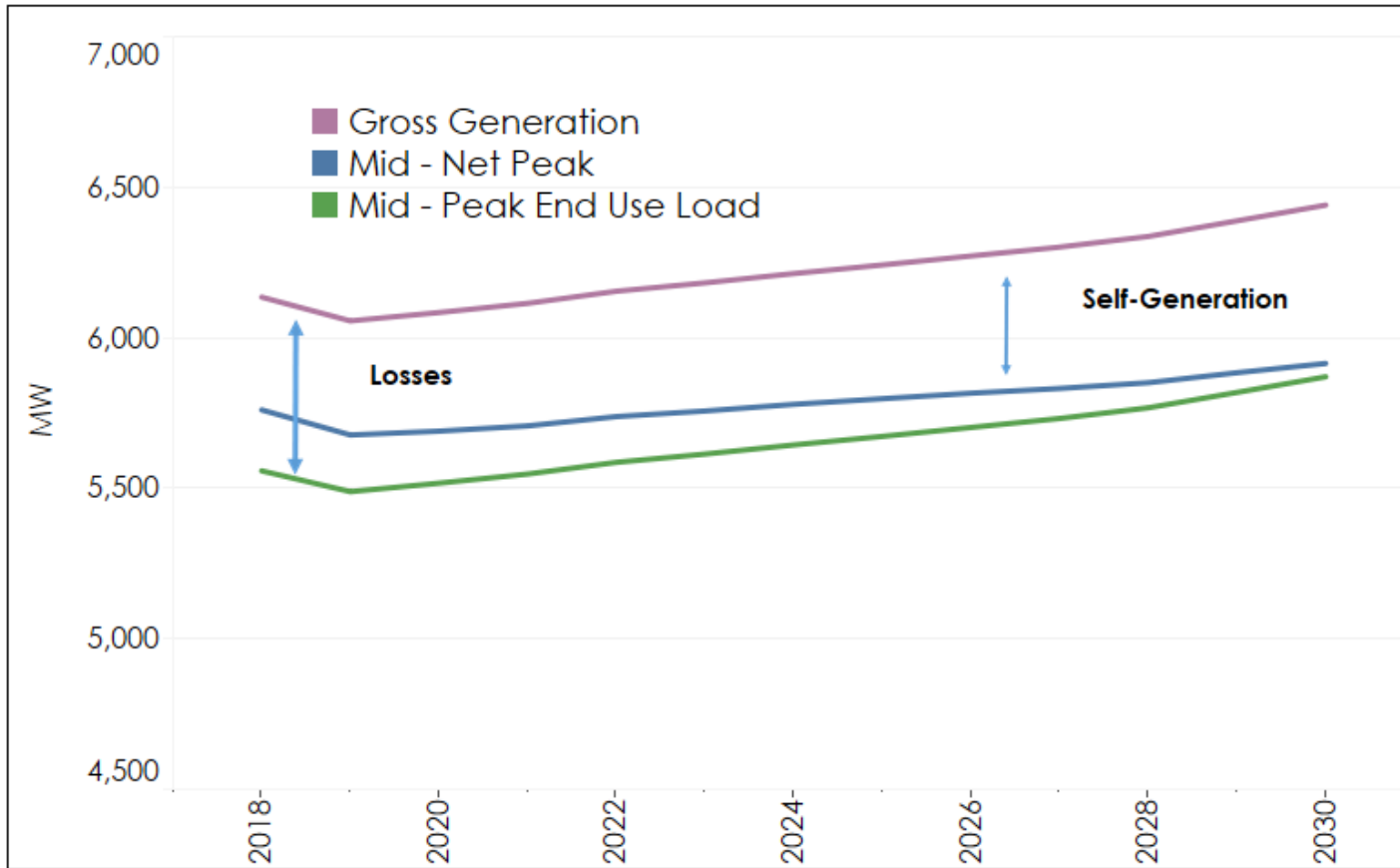
# LADWP: Consumption to Sales



- 0.9% average growth in sales from 2019 – 2030
- 2,400 GWh of self-generation by 2030
- Only 44% of self-gen is PV
- PV capacity grows slower than statewide average



# LADWP: End Use Load to Peak



- 0.4% average growth in net peak from 2019 – 2030
- 280 MW of PV impact at peak in 2030



# Planning Area Results

**SDG&E**



# SDG&E: Summary

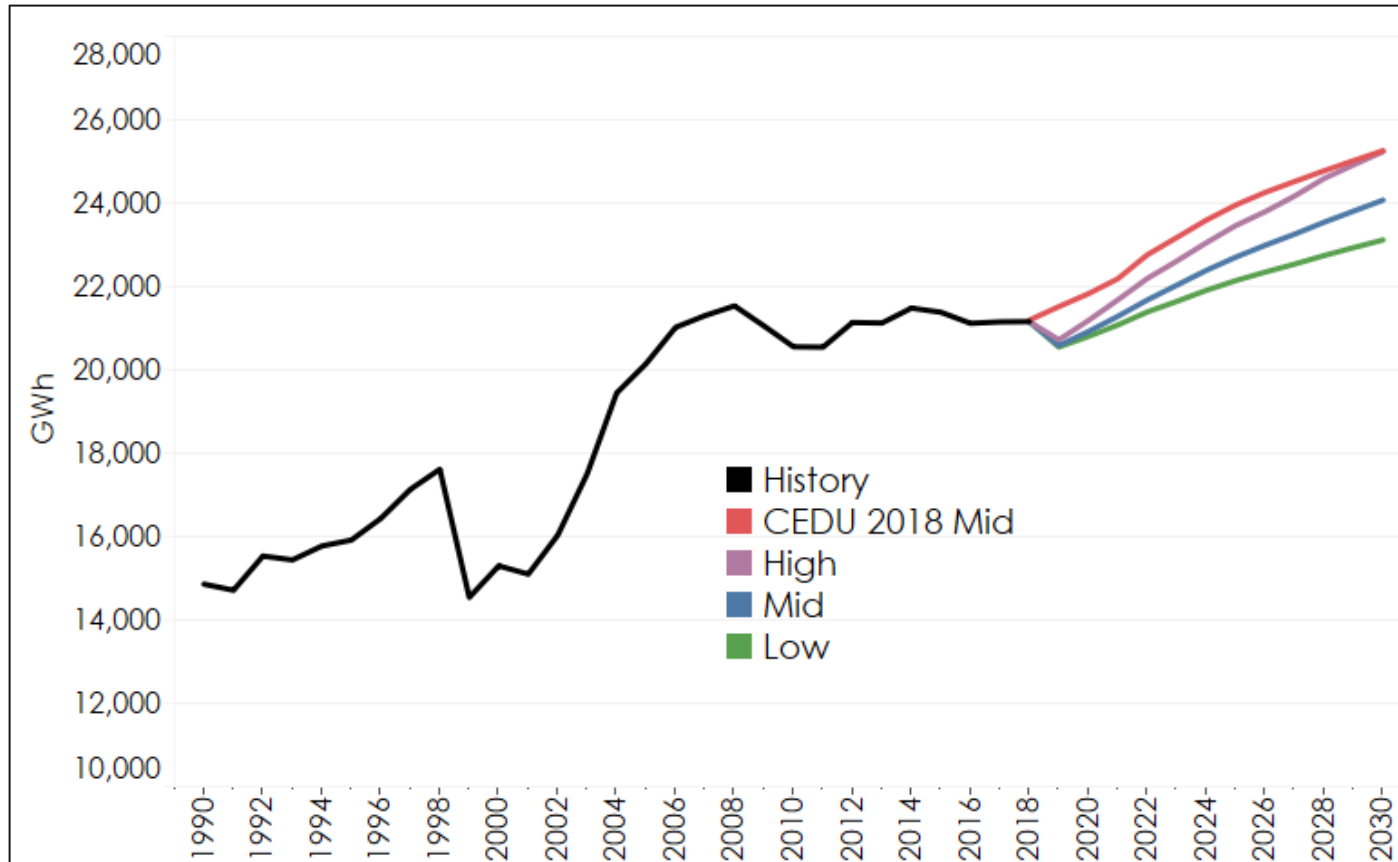
## Annual Average Growth in Mid Case Drivers, 2019 – 2030

- Population: 0.7%
- Households: 0.7%
- Personal Income: 2.4%
- Manufacturing Output: 2.3%
- Commercial Employment: 0.5%
- Decline in industrial/mining sector
- Residential and commercial sector growth is moderated by standards savings
- 1,300 GWh of light-duty EV consumption in mid cases by 2030 (300,000 EVs)
- 2,300 MW of PV capacity in mid case by 2030





# SDG&E: Consumption



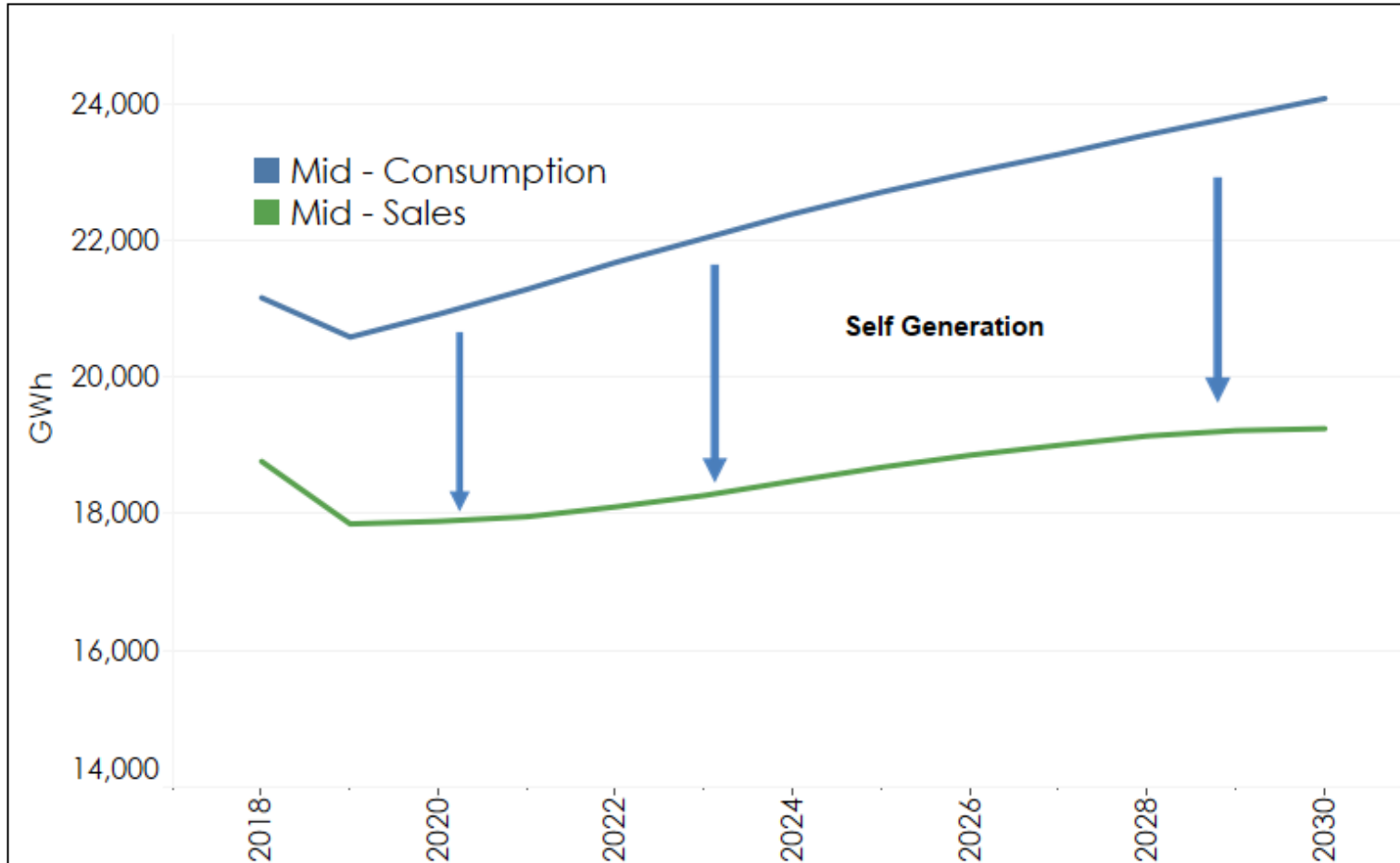
## Average Growth, 2019 – 2030

- Mid: 1.4% (1.5% - CEDU 2018)
- High: 1.8%
- Low: 1.1%

- Residential and commercial EVs sustain total consumption growth
- Industrial sector declines more than CEDU 2018



# SDG&E: Consumption to Sales



- 0.7% average growth in sales from 2019 – 2030
- 4,800 GWh of self-generation by 2030
- 85% of self-gen is PV
- 2,300 MW of PV capacity



# Planning Area Results

**PG&E**



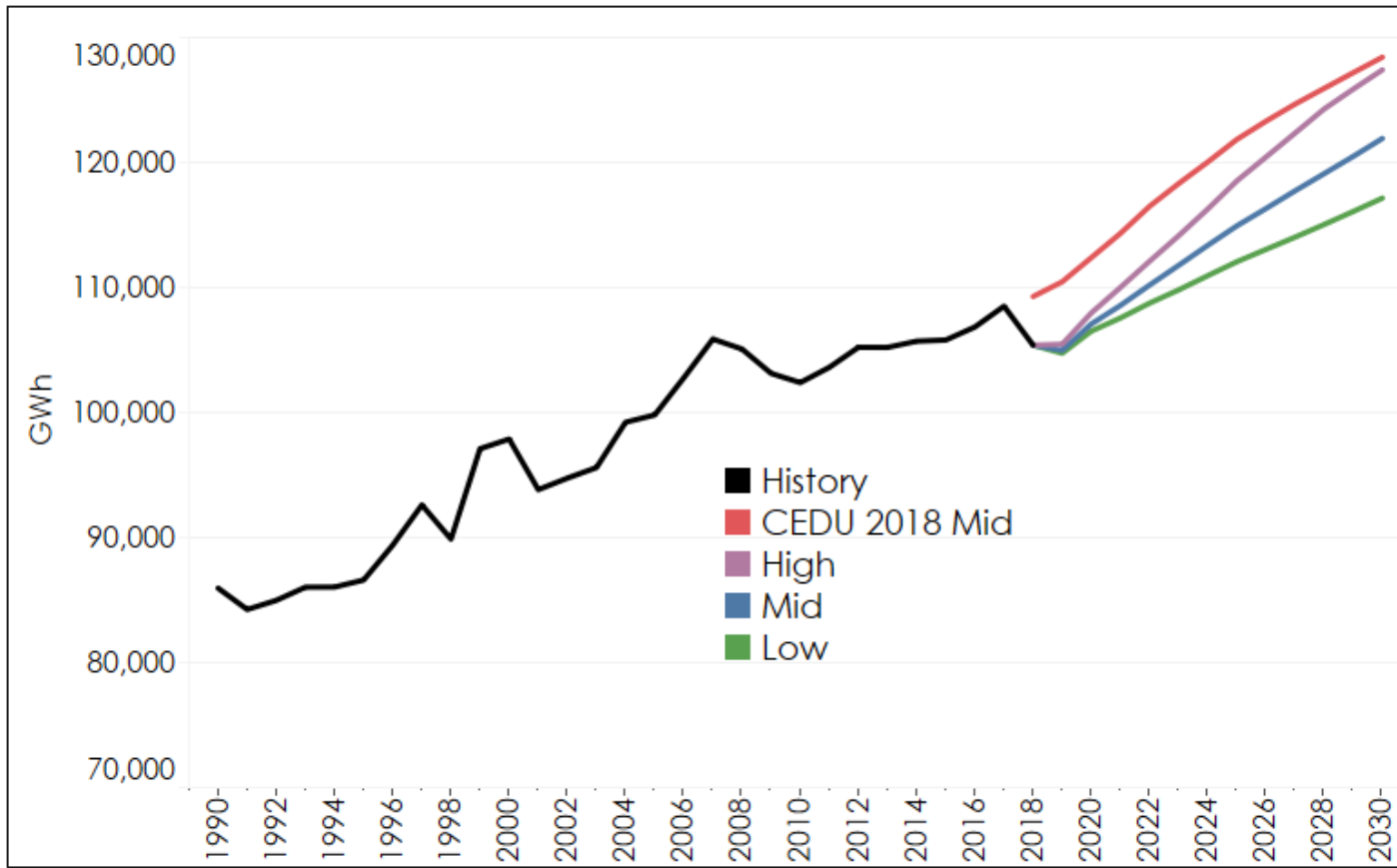
# PG&E: Summary

## Annual Average Growth in Mid Case Drivers, 2019 – 2030

- Population: 0.9%
- Households: 1.0%
- Personal Income: 2.8%
- Manufacturing Output: 2.2%
- Commercial Employment: 0.5%
- Population and household growth continues in Central Valley
- 6,400 GWh of light-duty EV consumption in mid cases by 2030 (1.6 million EVs)
- 10,600 MW of PV capacity in mid case by 2030



# PG&E: Consumption



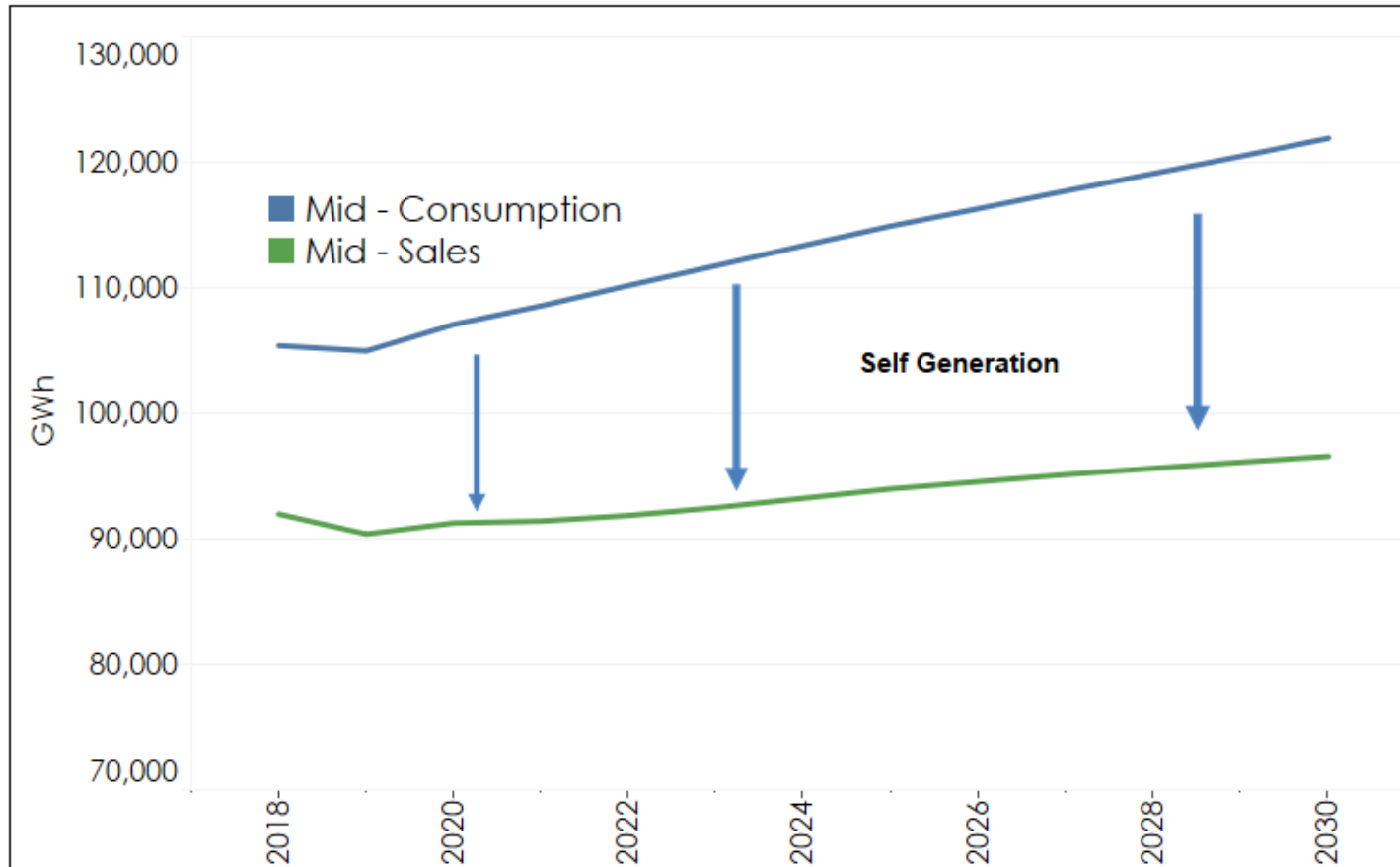
## Average Growth, 2019 – 2030

- Mid: 1.4% (1.4% - CEDU 2018)
- High: 1.7%
- Low: 1.0%

- Bay Area leads PG&E planning area at 1.5%
- Central Valley grows at 1.2% due sustained residential and commercial demand (40% of PG&E demand)



# PG&E: Consumption to Sales



- 0.6% average growth in sales from 2019 – 2030
- 25,300 GWh of self-generation by 2030
- 72% of self-gen is PV
- 10,600 MW of PV capacity



# Planning Area Results

**SCE**



# SCE: Summary

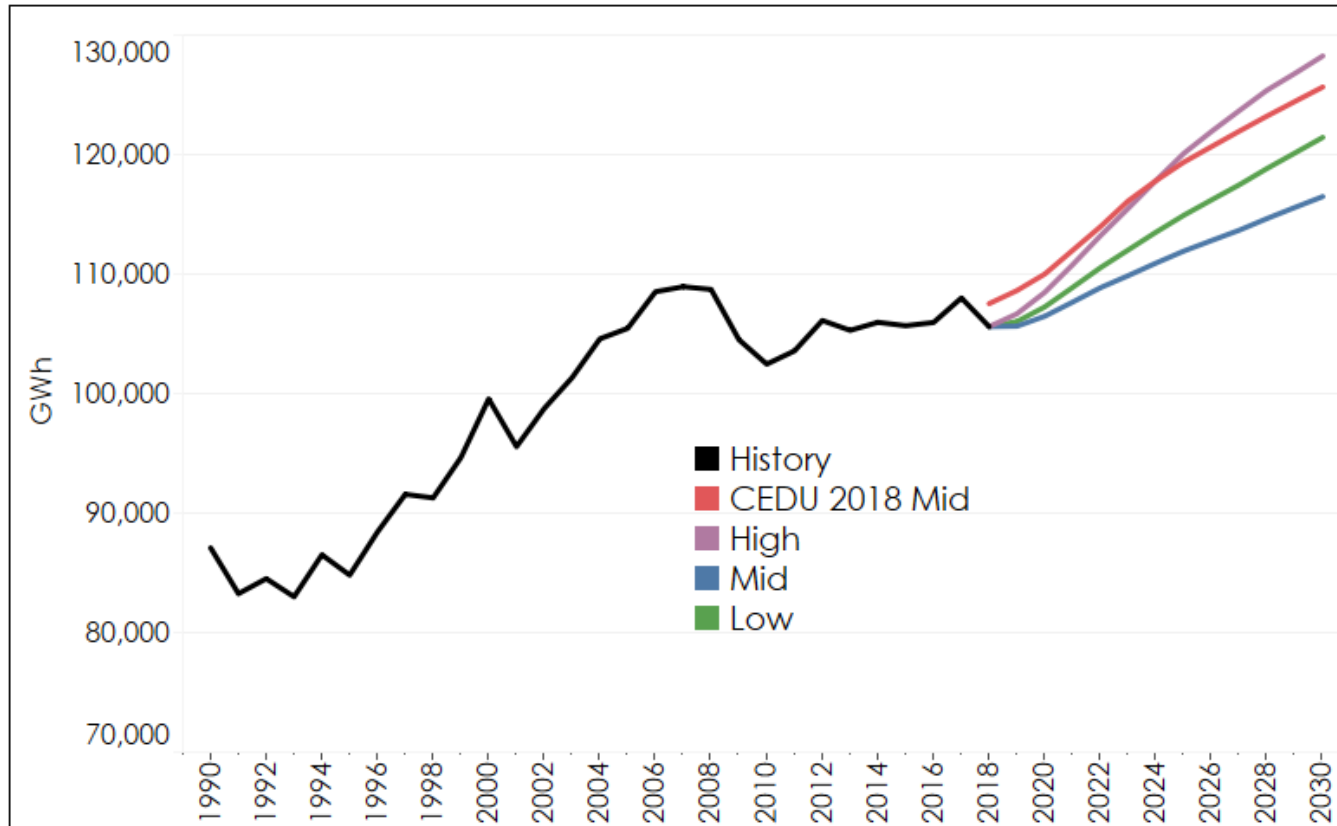
## Annual Average Growth in Mid Case Drivers, 2019 – 2030

- Population: 0.7%
- Households: 0.9%
- Personal Income: 2.2%
- Manufacturing Output: 1.9%
- Commercial Employment: 3.6%
- Population and household growth higher in inland areas
- 4,700 GWh of light-duty EV consumption in mid cases by 2030 (1.1 million EVs)
- 8,200 MW of PV capacity in mid case by 2030





# SCE: Consumption



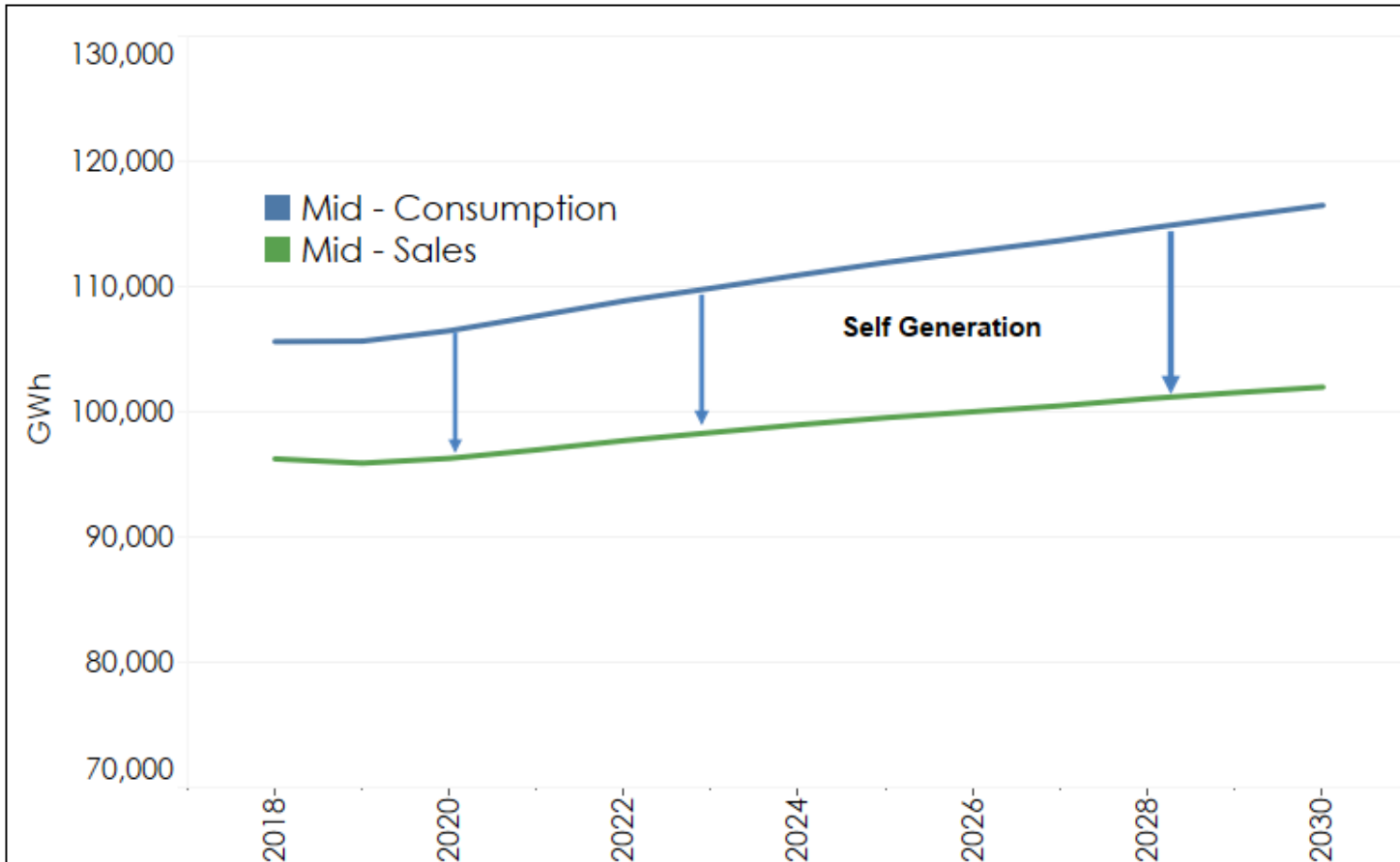
## Average Growth, 2019 – 2030

- Mid: 1.2% (1.3% - CEDU 2018)
- High: 1.7%
- Low: 1.0%

- Residential and commercial consumption account for 70% of electricity demand by 2030
- Eastern and Big Creek West grow at faster rates - 2% and 1.5%



# SCE: Consumption to Sales



- 0.6% average growth in sales from 2019 – 2030
- 19,500 GWh of self-generation by 2030
- 75% of self-gen is PV
- 8,200 MW of PV capacity

# Questions/Comments?



[Cary.Garcia@energy.ca.gov](mailto:Cary.Garcia@energy.ca.gov)

August 1, 2019

California Energy Commission