



Electric Utility Overview

Dukku Lee
General Manager



ANAHEIM PUBLIC UTILITIES



Anaheim Public Utilities

- Enterprise department serves electricity and water to customer-owners
- Not-for-profit, only allowed by City Charter to recover cost of service
- City Council serves as rate-making and budget approval authority
- Appointed Public Utilities Board conducts rate hearings

1895
Southern
California's First
Municipal Electric
Utility Established



Typical Substation



Anaheim Substations



Underground Conversion



Underground Conversion



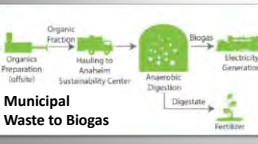
Anaheim Renewables



Solar for Schools



Anaheim Convention Center Solar



Landfill Gas Power Plant

TYPES OF ELECTRIC UTILITIES



GRID OVERVIEW



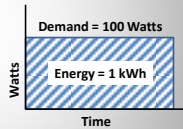
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Electricity 101



Load = 100 Watt Bulb

100 Watts x 10 hours =
1,000 Watt-hours =
1 kiloWatt-hour (kWh)



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Typical Electric Loads



Residential (single family)
Energy: 500 – 1,000 kWh/month
Demand: 5 kW peak

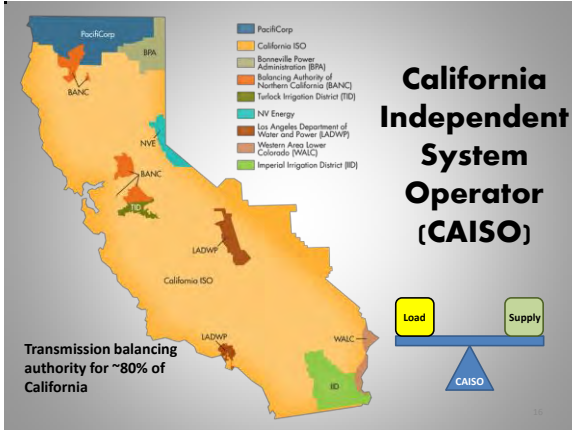
Small Commercial
Energy: 5,000 kWh/month
Demand: 15 kW peak

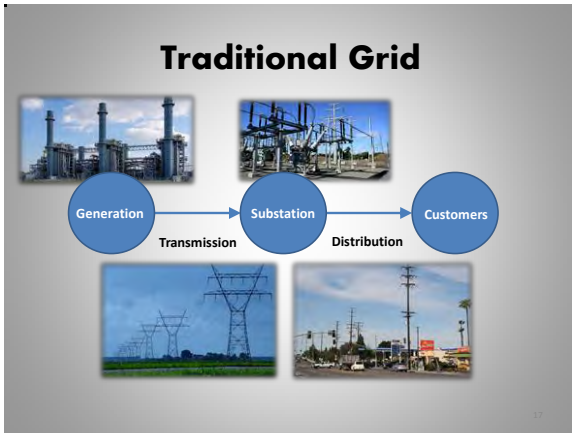


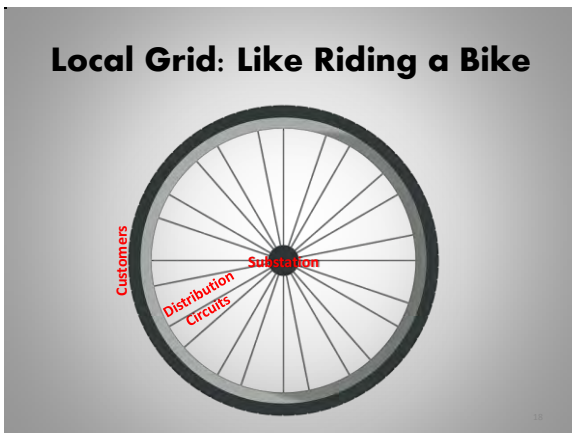
Large Commercial
Energy: 100,000 kWh/month
Demand: 200 kW peak

Industrial
Energy: 2,000,000 kWh/month
Demand: 4,000 kW or 4 MW peak

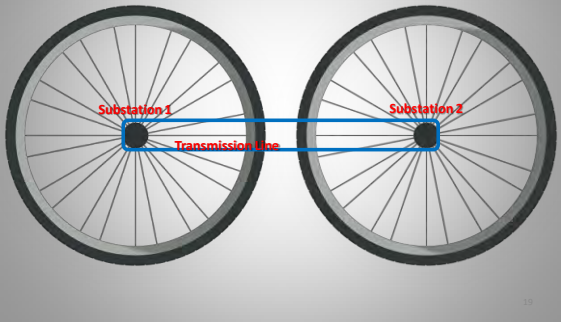




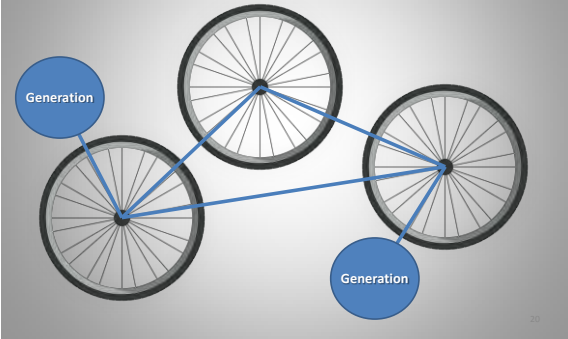




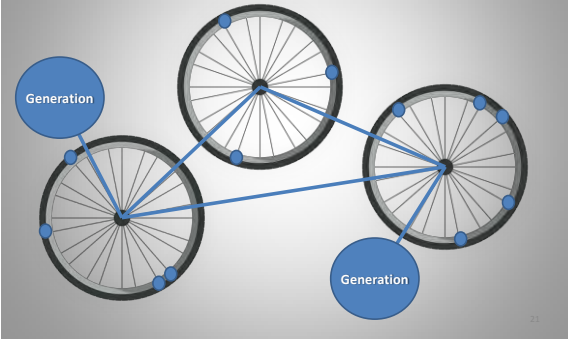
Like Riding a Bike



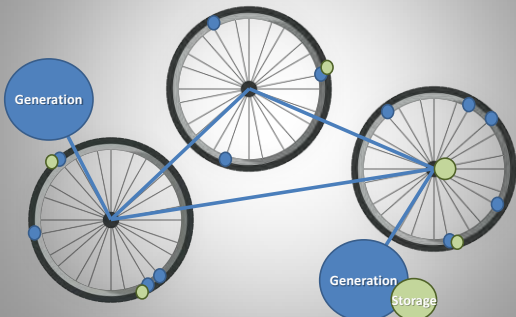
Like Riding a Bike



Like Riding a Bike



Like Riding a Bike



ELECTRIC INDUSTRY DRIVERS



Power Supply Legislation

- SB 1368 – Emission Performance Standard prevents extension of coal resources
- SB 1 – Million Solar Roof Initiative
- AB 32 – Greenhouse gas reduction established Cap & Trade market
- SB 350 – established 50% renewable target by 2030



ELECTRIC UTILITY RATES



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Cost Components

- Regulations
- Capital Investments
- Operations & Maintenance
- Reserves
- Debt Service
- Power Supplies
- Shareholders or General Fund



Recovery



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Rate Comparison

Electric bills differ


A survey of electricity providers, comparing October 2014 bills at different usage levels, found that the private companies charge more than municipal utilities.

	2,000 kWh	1,000 kWh	500 kWh	200 kWh
Edison	\$542.99	\$255.06	\$97.34	\$30.63
PG&E	508.05	263.66	93.11	31.60
SDG&E	723.11	311.71	116.42	34.84
Private average	621.38	276.88	102.26	32.32
Los Angeles	\$344.92	\$167.56	\$78.88	\$29.87
Sacramento	311.33	136.03	58.30	30.52
Anaheim	379.86	193.31	83.54	29.14
Burbank	347.87	162.66	75.87	29.25
Glendale	340.86	160.70	74.01	32.94
Pasadena	396.12	195.99	88.04	33.78
Riverside	363.57	171.55	81.23	39.86
Azusa	339.71	167.67	81.65	31.68
Banning	608.63	218.42	99.80	37.81
Colton	450.79	188.01	72.71	19.58
Imperial Irrigation Dist.	250.34	127.02	65.36	28.37
Vernon	179.17	61.10	47.07	20.65
Public average	351.08	163.59	75.54	30.29

Sources: Survey by Southern California Public Power Authority, San Diego Union-Tribune, Los Angeles Times

California electric bill shock: Private firms charge way more than public utilities, Los Angeles Times, June 14, 2015

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