



Affiliates Forum

Nancy Ander, P.E., Deputy Director

DGS Office of Sustainability

April 16, 2019



Discussion Today

- Who We Are As A Customer
- Historical Drivers
- Recent Executive Orders/Legislation
- Areas of Focus
- Going Forward



DGS – The State as a Customer

What is DGS's Role?

- DGS is the state's business manager
 - We provide a variety of services to state agencies, including procuring or facilitating the procurement of energy services for our state facilities
- Driven by operational efficiency
 - Reduce utility bills
 - Use limited resource efficiently
- Driven by policy goals
 - Chief implementation arm for CA state facilities
 - Energy efficiency, renewables, electric vehicles, ZNE, carbon neutrality



Historical Drivers

AB 32 (2006) Recognizes serious threat of global warming

- Requires California to reduce its GHG emissions to 1990 levels by 2020

EO B-18-12 (2012) Establishes aggressive State targets for GHG reduction, energy/water use reduction and ZNE

EO B-30-15 (2015) Global warming –

- Targets GHG emissions to 40 % below 1990 levels by 2030 in order to reach 80% below 1990 levels by 2050 both statewide and for state facilities.

SB 350 (2015)

- 50% RPS by 2030
- Doubling of energy efficiency savings by 2030
- Requires widespread transportation electrification to meet goals.



Recent Executive Orders/Legislation

IPCC Report (2018) Prepared by over 90 authors from 40 countries

- Climate change manifesting at much higher rates than previously assumed. At a target of 2 deg C (all coral reefs would be lost, sea ice levels plummet)
- Evidence for need to reduce global temp rise to 1.5 deg C.

EO B-48-18 (2018)

- 5 million ZEVs on CA roads by 2030

SB 100 (2018)

- New target – 60% (previously 50%) RPS by 2030. 100% RPS by 2045 for both state departments and statewide.

EO B-55-18 (2018)

- Statewide carbon neutrality by 2045



DGS Sustainability Focus Areas

Responsible for Greening the State's Own Facilities

- Energy Efficiency
 - New construction – 15% better than T-24
 - Existing buildings – established efficiency targets for ZNE readiness
- Electric Vehicle Charging Infrastructure
 - Have installed over 1000 charging points serving fleet and employees
 - Plan to install over 6,000 charging ports over the next 5 years
- Renewables
 - Will install approximately 70 MW of onsite renewables by end of 2019
 - Have purchased 39 MW of community solar



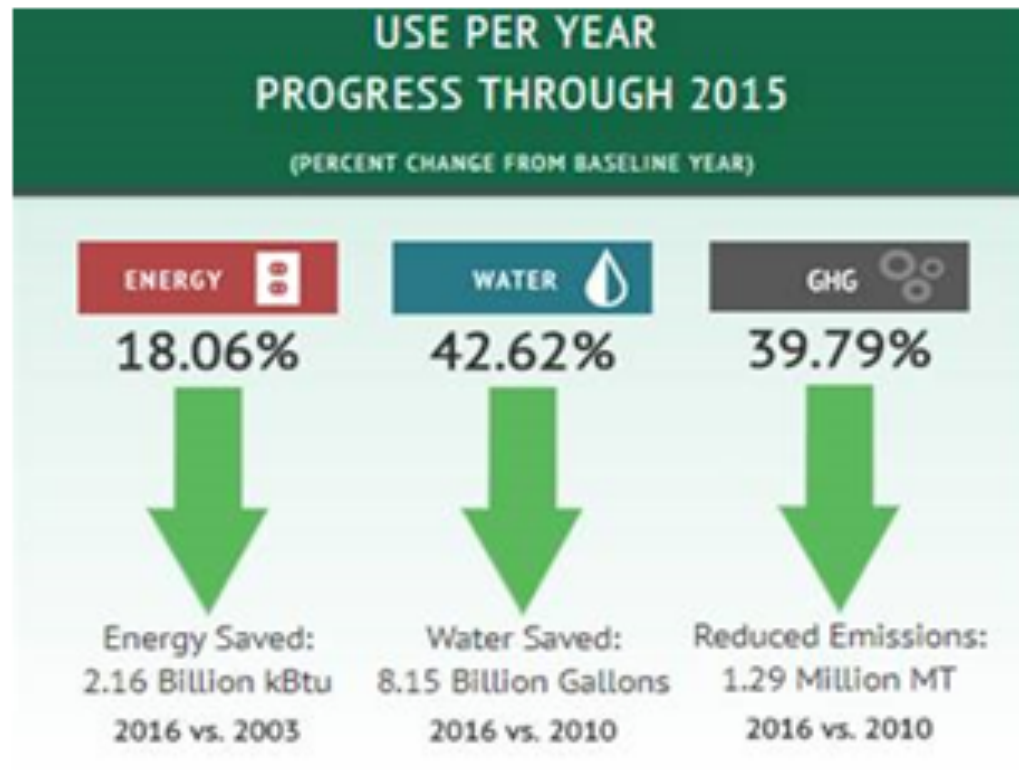
DGS Sustainability Focus Areas

Responsible for Greening the State's Own Facilities

- Zero Net Energy
 - Targeting ZNE for all new construction
 - Have achieved ZNE for 20% of existing buildings
- Water Savings
 - Recently completed water grant program, saving 300M gallons/year
- LEED Certification
 - Now have over 200 state buildings certified at the silver level at minimum



State Sustainability Progress





The Future

- **People Safety**
 - *Vulnerable populations*
 - *Climate resilience, particularly relating to wildfires in California*
 - *Climate mitigation: More! DERs behind the meter from prosumers*



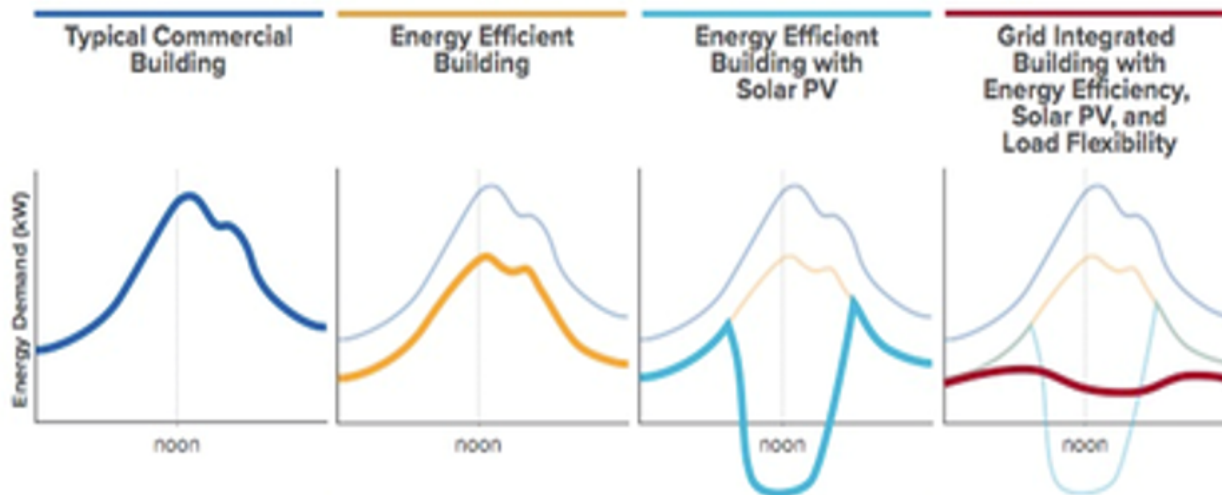
California's Camp Fire, which largely destroyed the town of Paradise, is the state's most destructive blaze on record. Photo: Justin Sullivan/Getty Images



The Future - Continued

- **Grid Reliability**

- *Integrated resource planning*
- *Building to grid, Vehicle to grid*
- *Address duck curve and intermittency*
- *Storage*



Source: Rocky Mountain Institute <https://rmi.org/grid-integrated-buildings/>

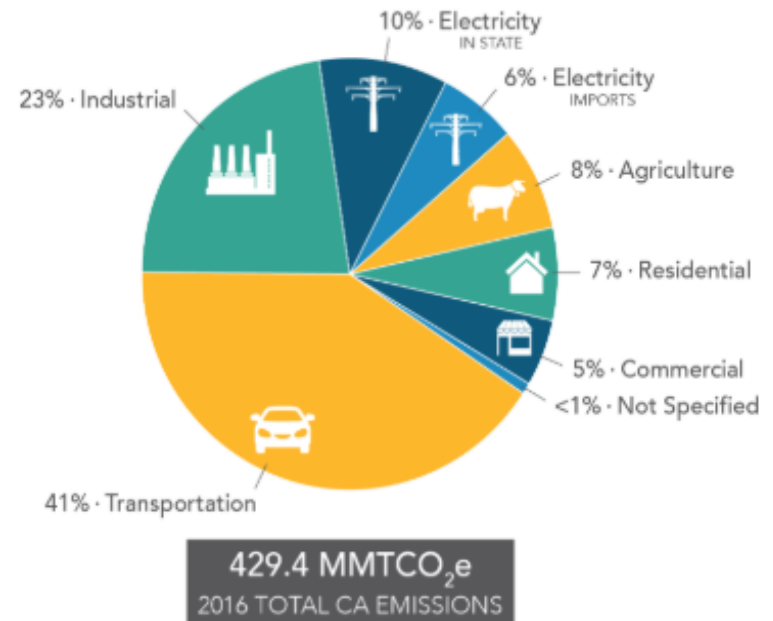


The Future - Continued

- **Carbon Neutrality**

- *Climate mitigation:
Efficiency, renewables*
- *De-carbonization
Aggressive shift*
- *Cost effectiveness metrics:
Quantitative value for carbon!*
- *Codes and Standards:
Foundational to changing
the industry*

Emissions by Economic Sector



Source: California Air Resources Board
<https://www.arb.ca.gov/cc/inventory/data/data.htm>



This is Us



Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has. Margaret Mead



Thank You!

Nancy Ander, P.E.

Deputy Director

DGS Office of Sustainability

nancy.ander@dgs.ca.gov