

APS' Customer Centric Approach to Clean Energy

October 19, 2021



Overview: The “Why” of APS DSM Programs



Clean

Reducing emissions by saving energy and shifting load to match renewable generation



Affordable

Lowering costs for all customers by reducing peak demand and flattening load shapes



Reliable

Reliable and measurable load flexibility including consistent, system-wide peak load reductions and improved integration of solar resources

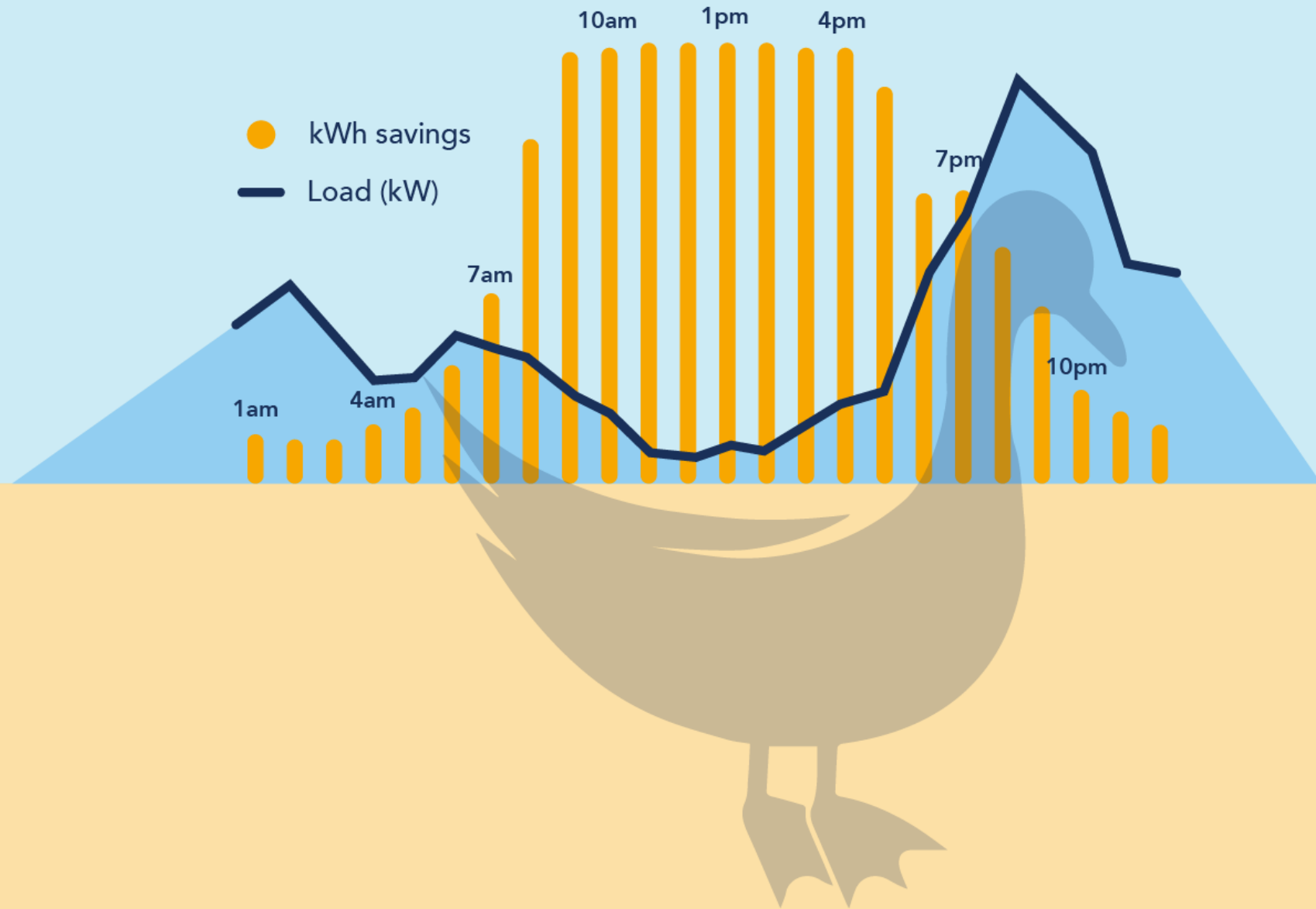


Customer focused

Customers are motivated by incentives and the ability to maintain low electricity rates and minimize grid's environmental impact

Why did we act?

Traditional DSM portfolio can exacerbate the “duck curve”





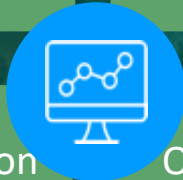
1MM+ residential customers



Started with BYOT, transitioning to
full scale DER aggregation

System and feeder
targeted load reduction

System and feeder
voltage support



Renewable integration

On-demand capacity



Cool Rewards



Reserve Rewards



Storage Rewards

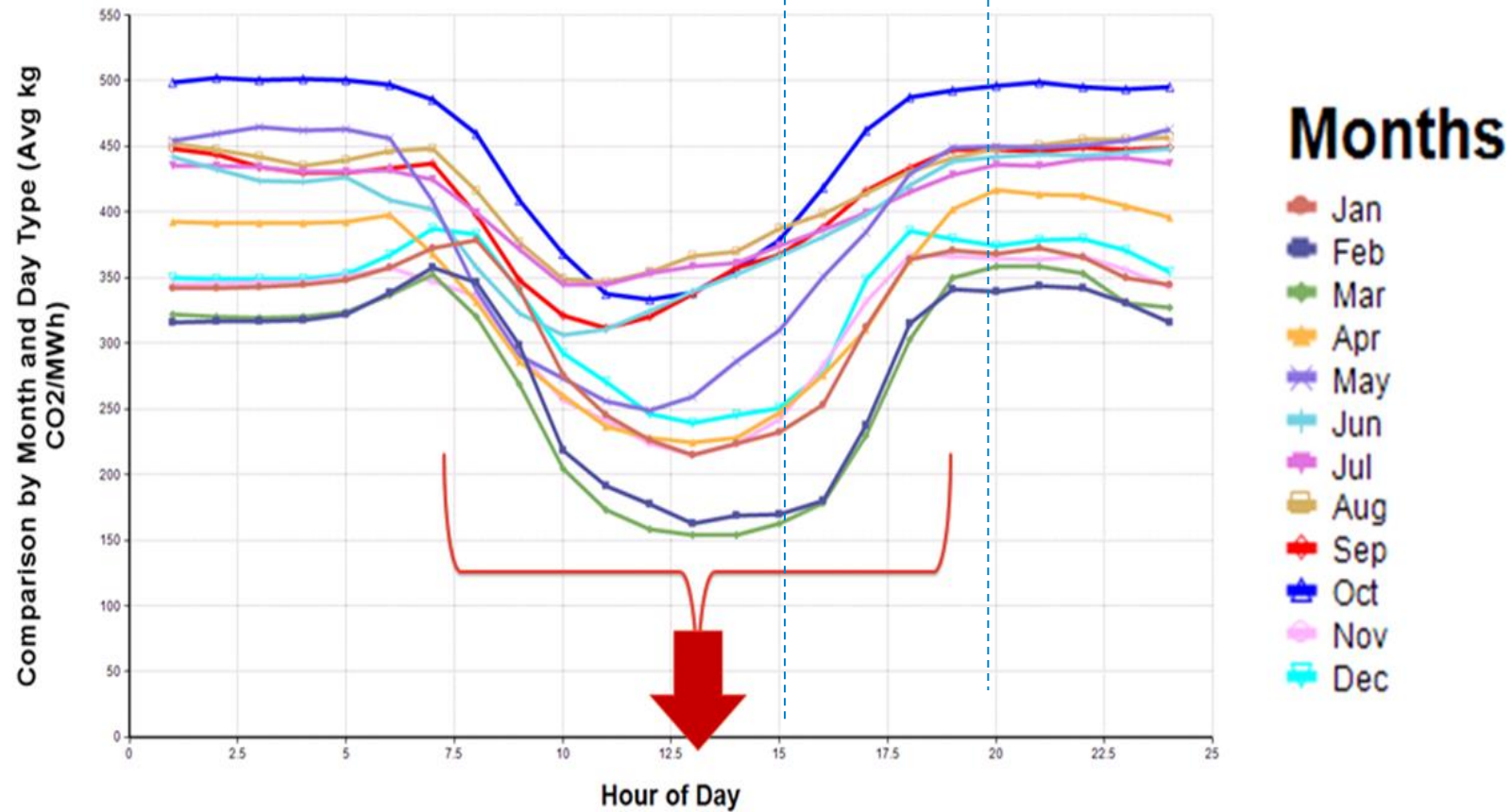


Solar Communities



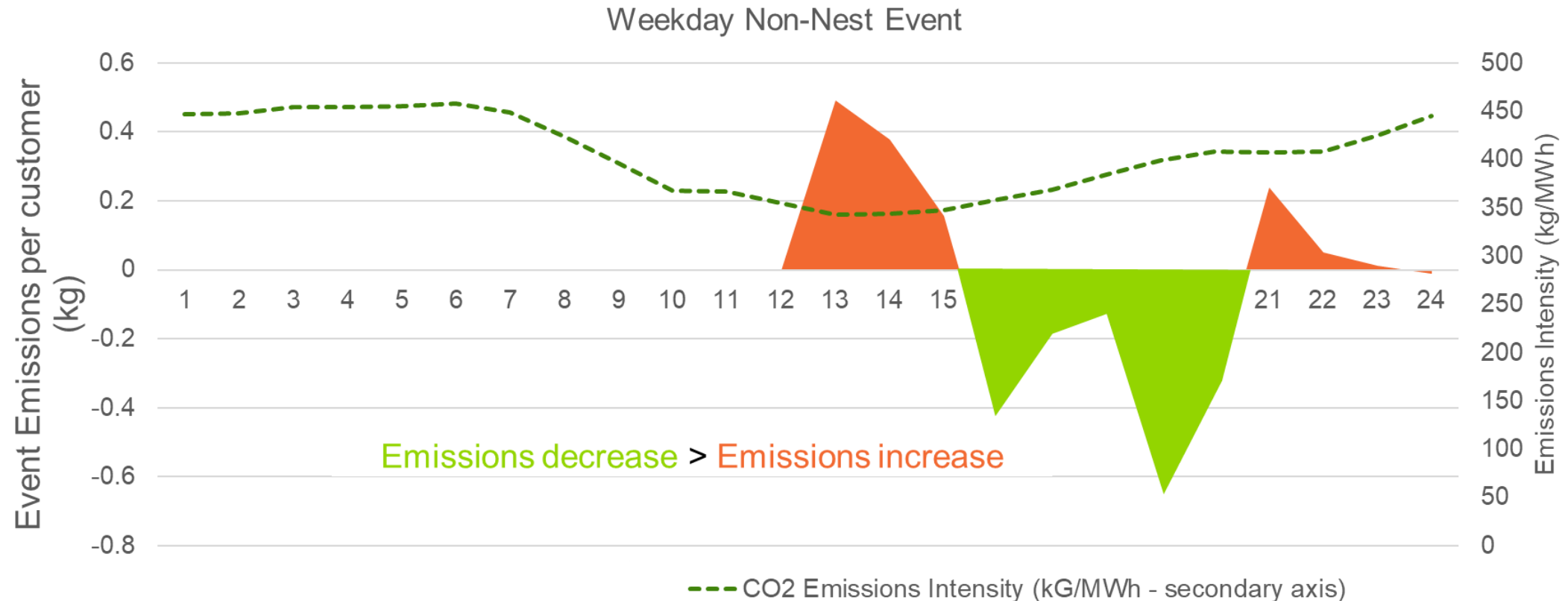
Future Look at Carbon Intensity: Blocks of Low Emission Time Periods

Average emissions intensity is lower in the mid-day for all months in 2024.



Cool Rewards Smart T-Stat DR Emissions Reduction

With pre-cooling, consumption is shifted to the mid-day when emissions intensity is lowest, resulting in a net impact of -.31 kg CO2 per customer.

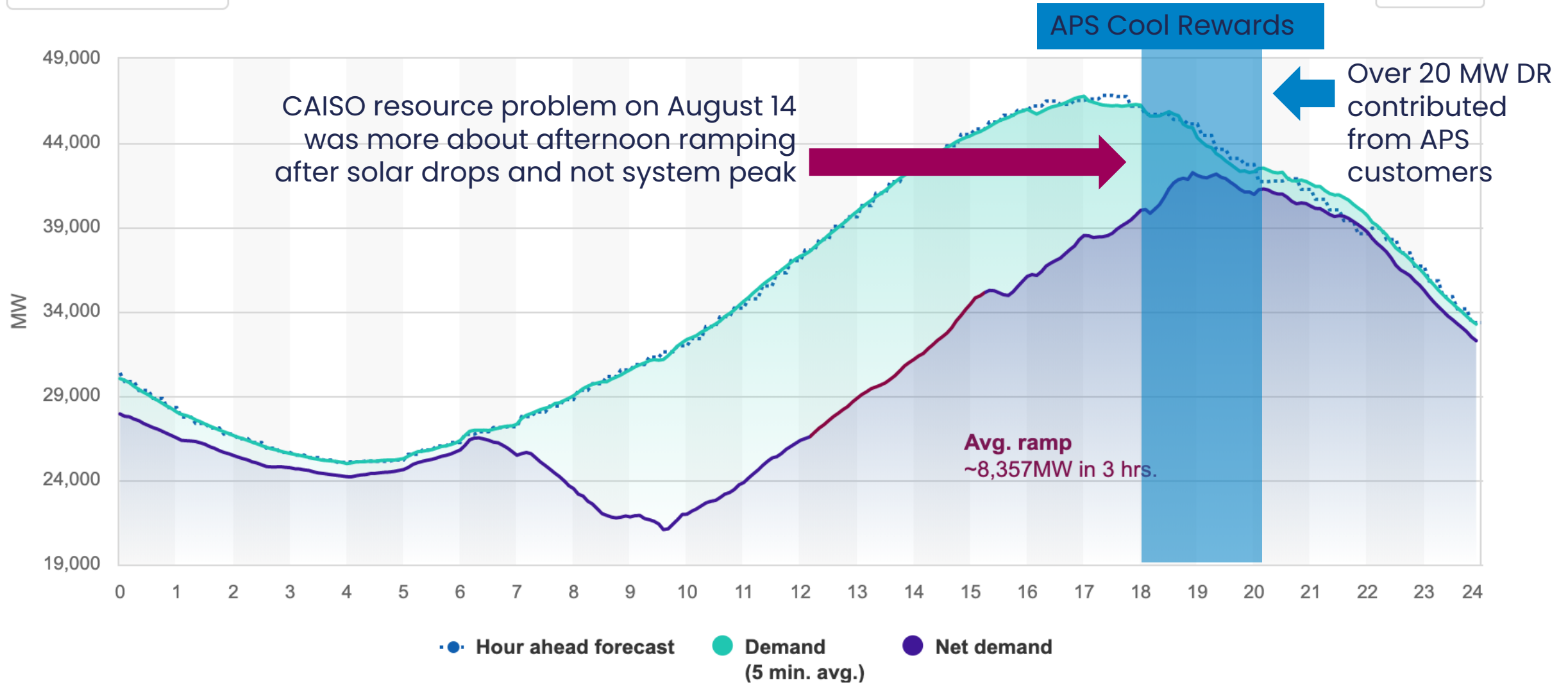




08/14/2020 ▾

APS Cool Rewards Events Address Regional Net Demand Needs

Data ▾



Progress in 2021

APS Plan Coach drives on-peak behavior change

- Messaging up to 160k TOU (in-market)
- Messaging up to 100k TOU+Demand (coming soon)

APS Marketplace engages customers in DERs

- Over 600,000 unique customer visits in 9 months!

APS scales Cool Rewards

- Doubled participation to ~53,000 thermostats
- Achieved ~70 MWs+ in summer 2021 events

APS launches new Residential Storage pilot



Thank You!

Tom Hines
tom.hines@tierrarc.com
tom.hines@aps.com

