

# COVID-19 impacts on US electricity use

Joshua D. Rhodes, PhD

USAEE/CGEP

April 23, 2020

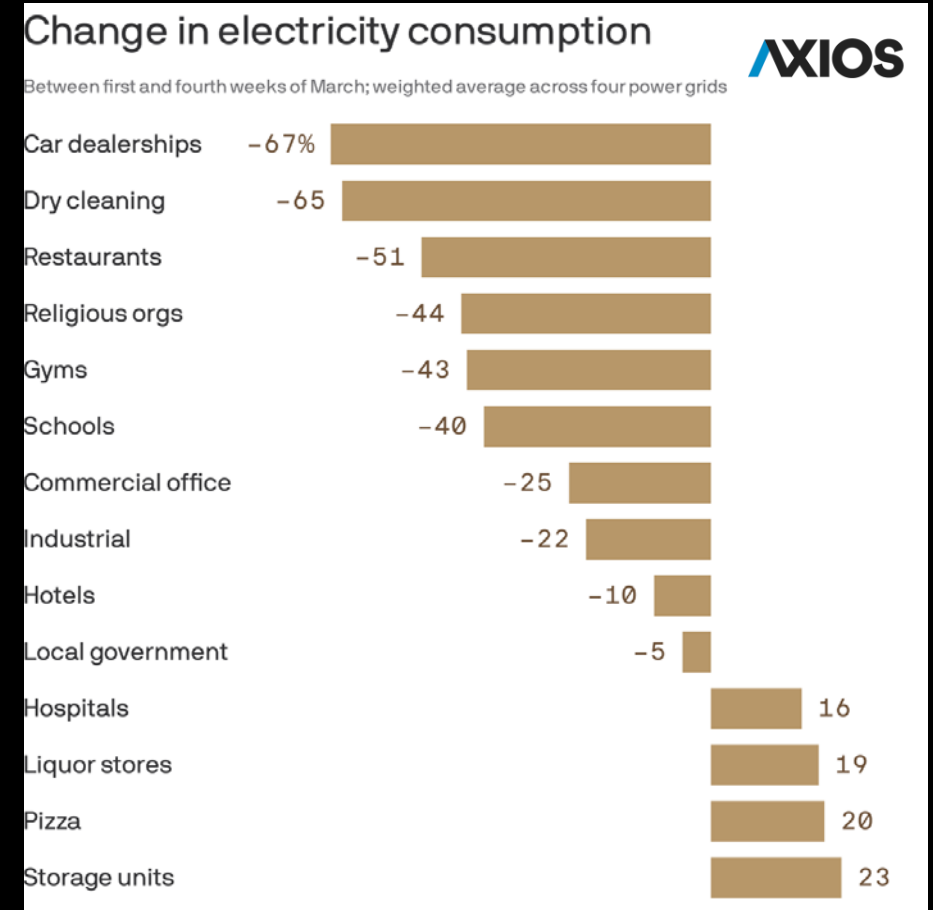
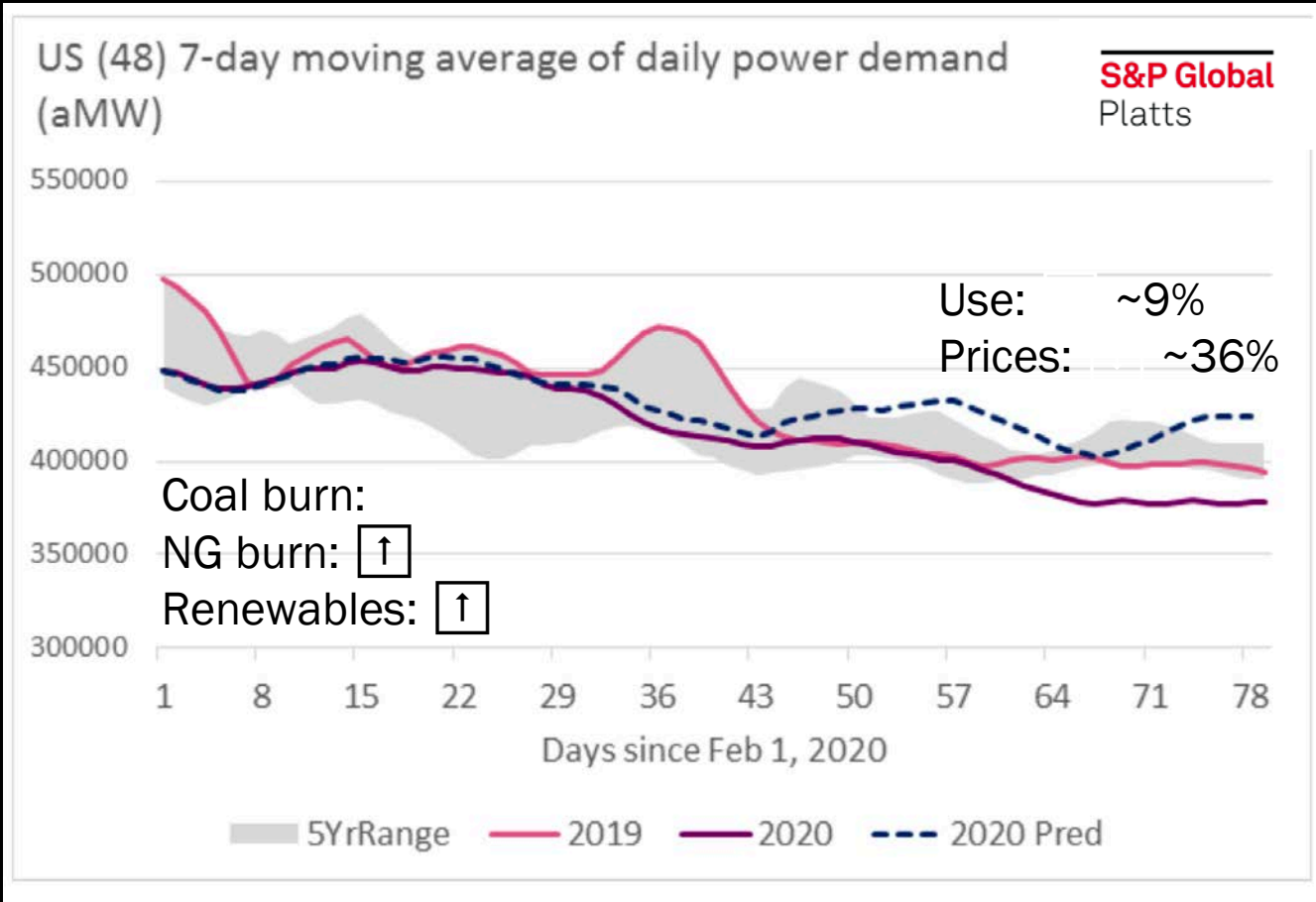


**Webber Energy Group**

---

THE UNIVERSITY OF TEXAS AT AUSTIN

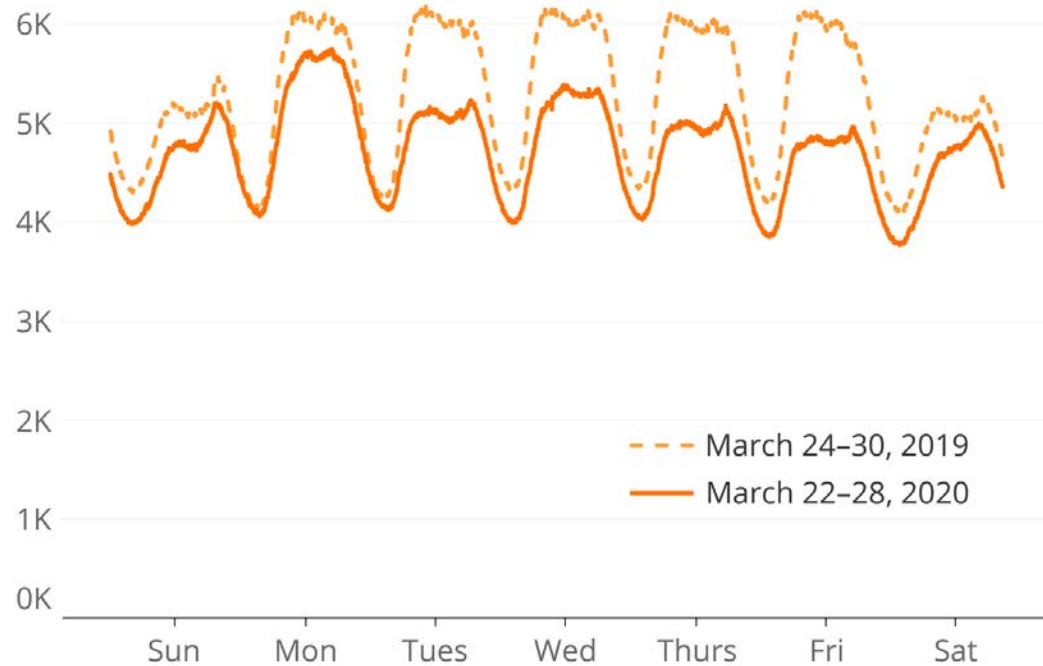
# COVID-19 is reducing how much electricity we use



# COVID-19 is also changing when we use out electricity

## Powering down

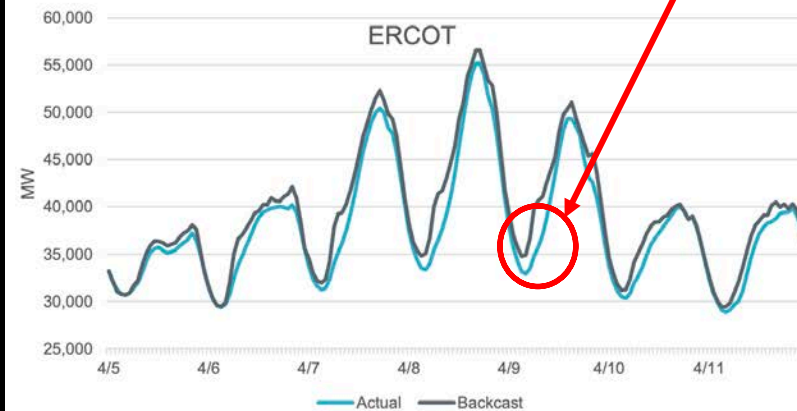
New York City load, megawatts



Source: New York Independent System Operator

grist

## Week Beginning 4/5



Sleeping in much?

- First week where daily peak values are consistently lower
- Several hot days this week

- Shoulder season: more dramatic changes to come



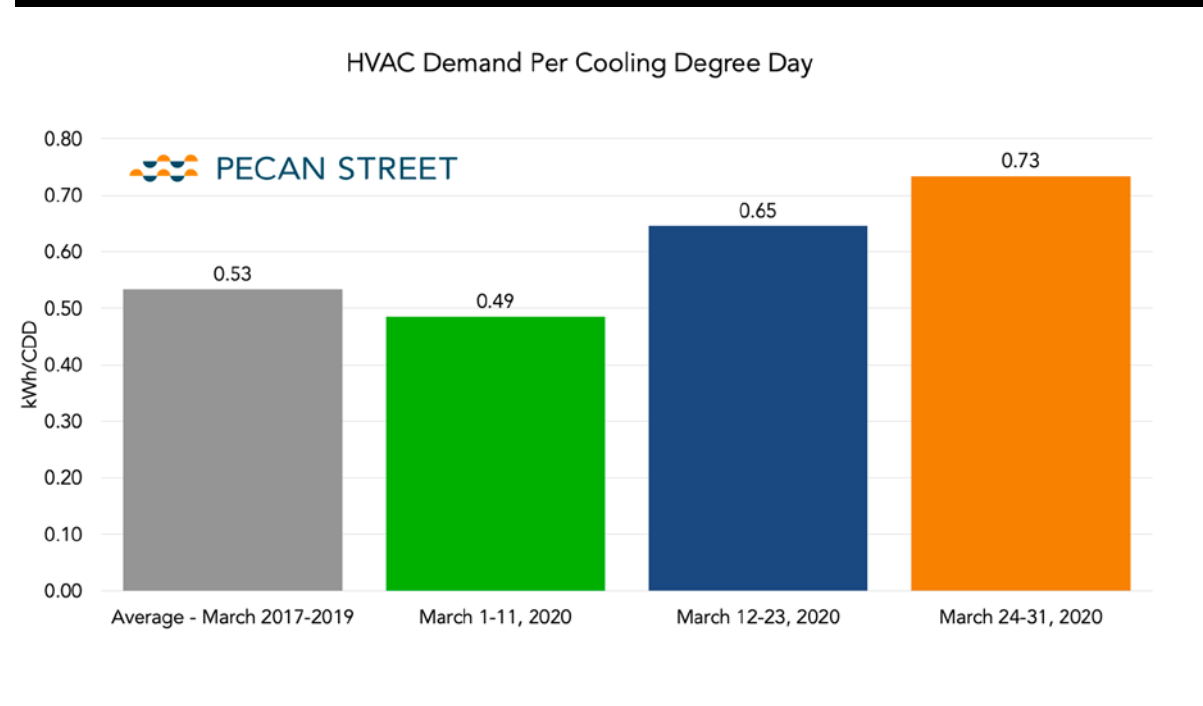
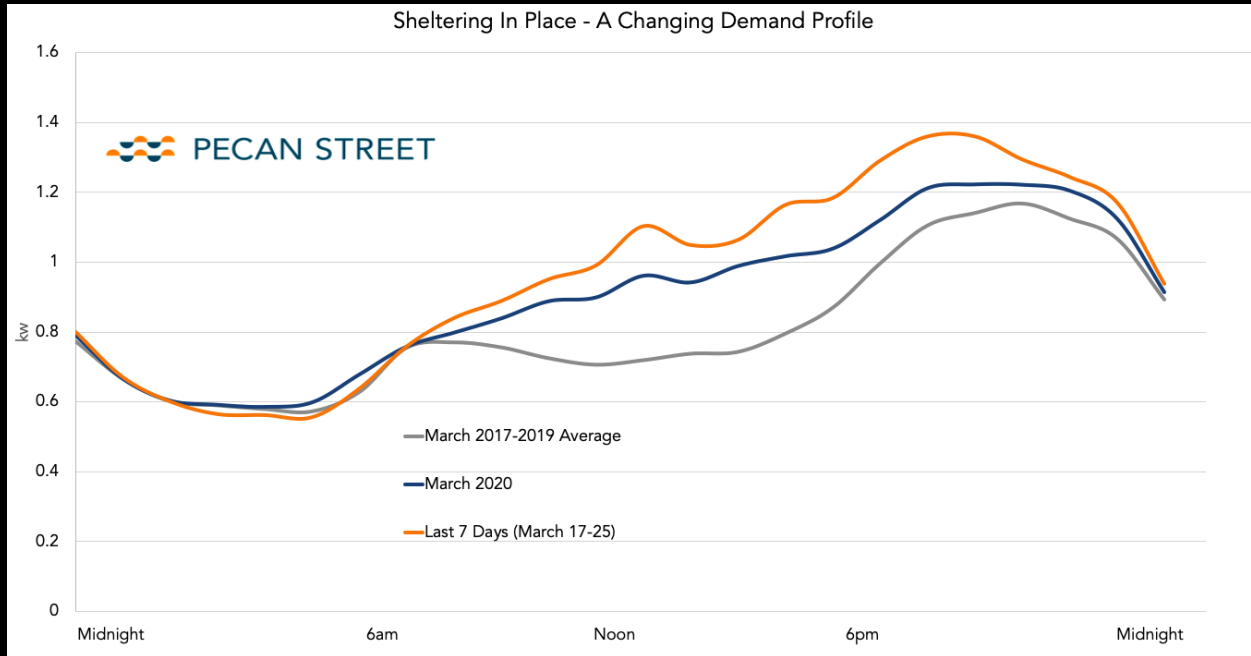
Webber Energy Group

THE UNIVERSITY OF TEXAS AT AUSTIN

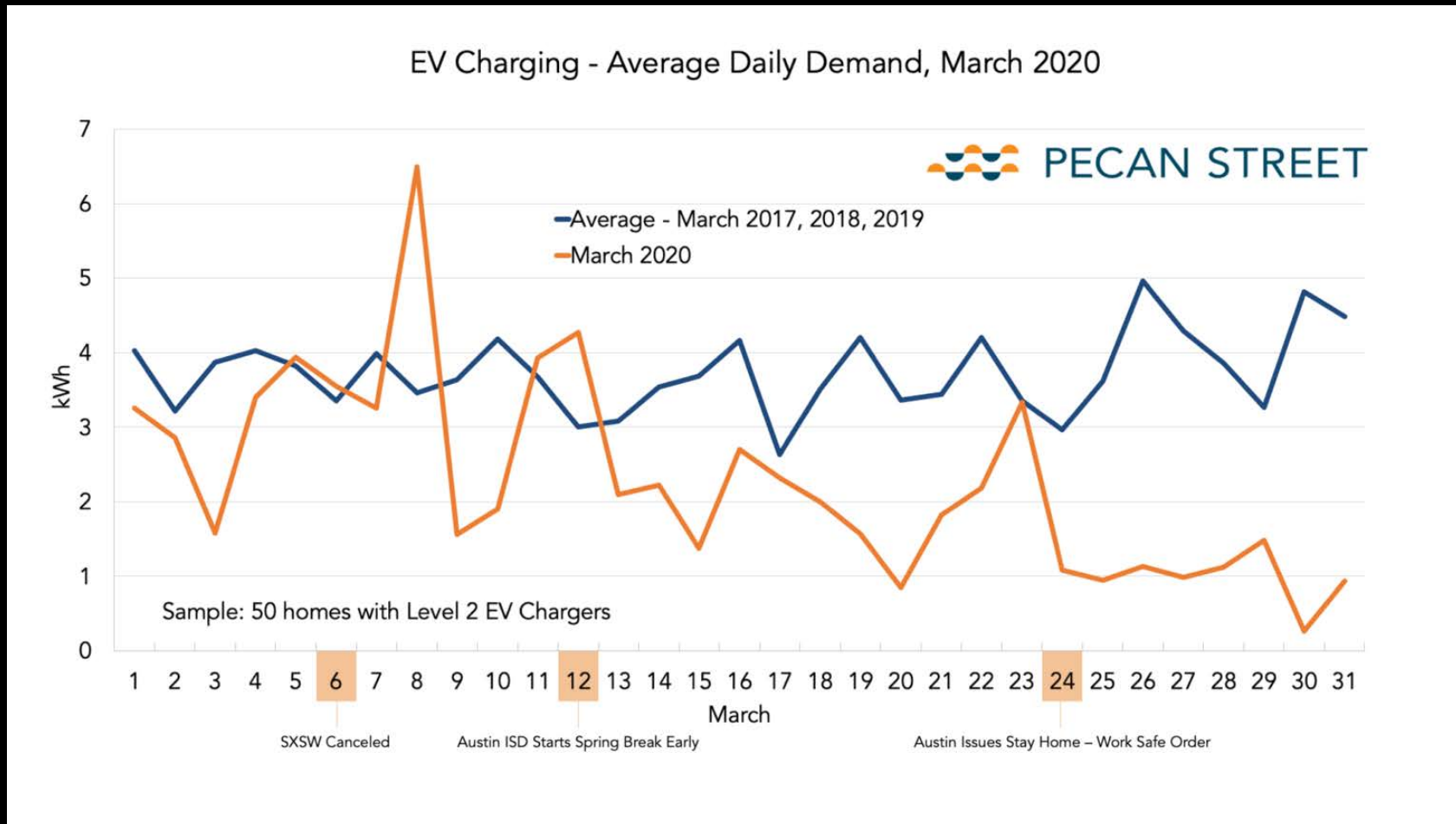
Joshua D. Rhodes, PhD | USAEE/CGEP

April 23, 2020

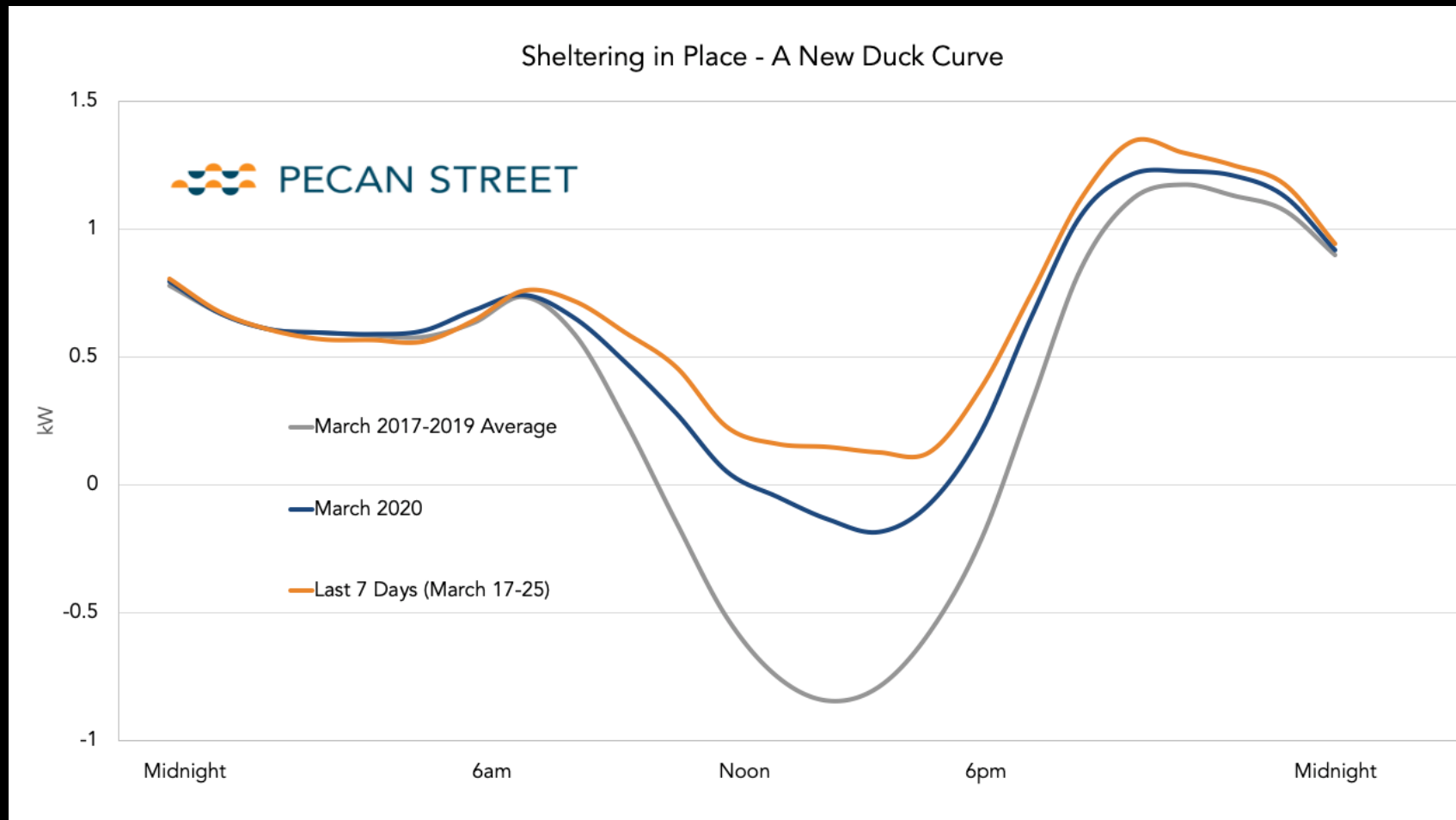
# However residential electricity use is generally up



# But like gasoline, EV charging has declined



# And the residential duck curve is fading



# Many interconnected markets are in flux

- Less oil production -> less natural gas production?
  - Much natural gas is associated with oil
    - 1/3 in shale regions & 12% of US production
  - Higher natural gas prices -> higher electricity prices?
    - Still depends on load, etc.
- Renewables seen as safe haven?
  - Reliable returns in a turbulent world

“Remember that as oil prices have come down, rig counts have come down in the Permian, which means there’s a lot less associated gas — which has actually helped natural gas prices... We’ve seen a bit of an uptick [in gas prices], especially recently.”

- John Ketchum, NextEra



# Joshua D. Rhodes, PhD

*Department of Mechanical Engineering*

*Webber Energy Group*

*The University of Texas at Austin*

joshdr@utexas.edu | @joshdr83

www.webberenergygroup.com



## Webber Energy Group

---

THE UNIVERSITY OF TEXAS AT AUSTIN