



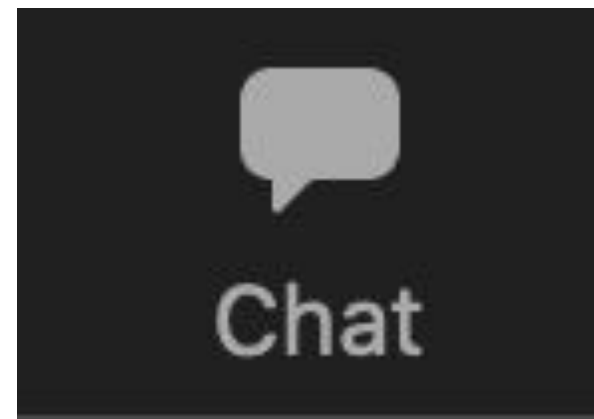
Shifting Energy Use Trends Due to COVID-19



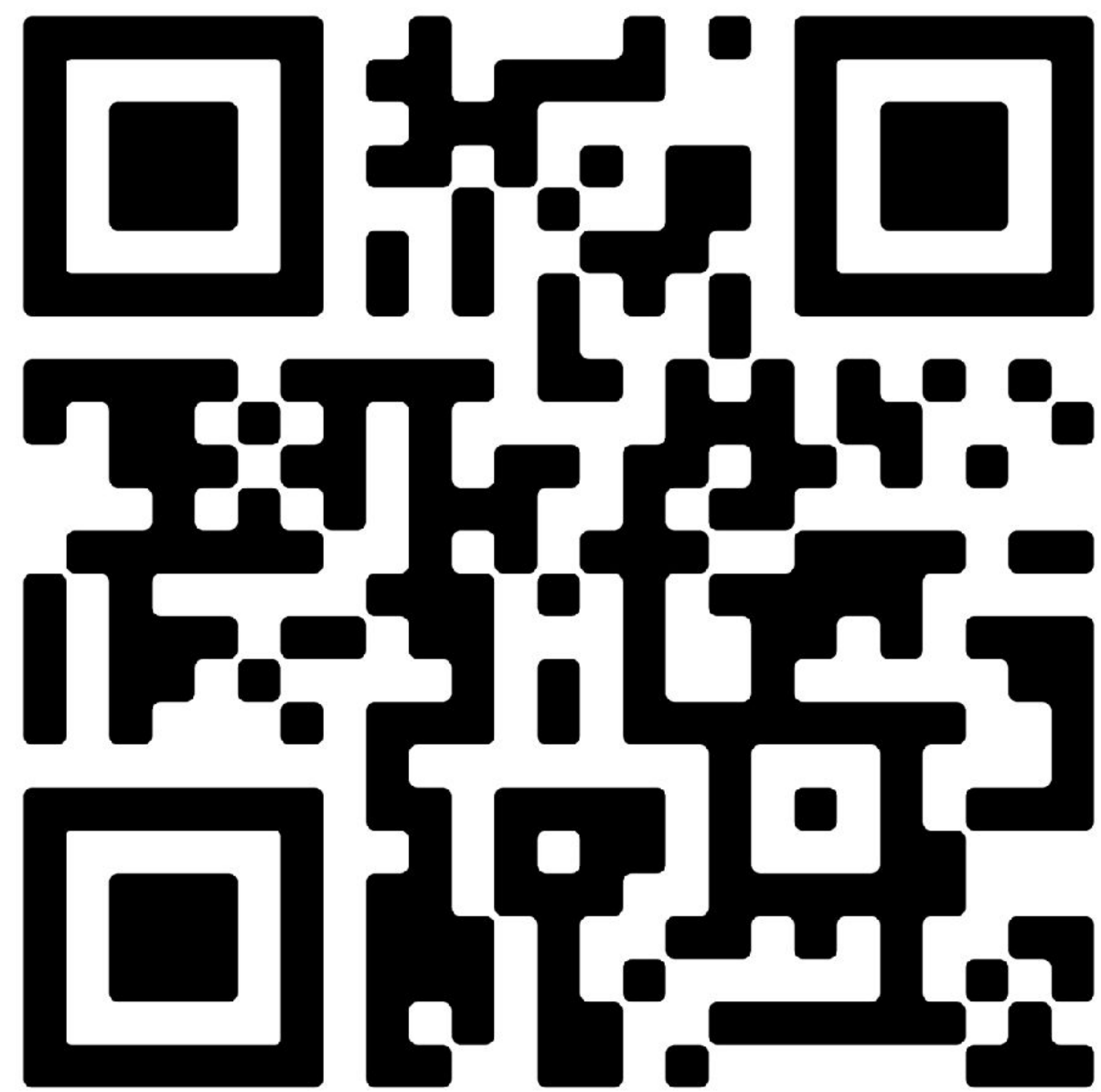
Colin Rowan, Director of Communication, Pecan Street



Scott Hinson, CTO, Pecan Street



Question? Use the chat function.



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pecanstreet.org/2020/04/covid/

Energy



Water



Transportation



Field Research



Our Approach

- 1,000 homes
- Real-time, unique data
- Expanding into CA & NY: 100 homes in each state

Data Collection and Access



2.5 BILLION
RECORDS ADDED DAILY



2,000
UNIVERSITY-SPONSORED
RESEARCHERS



200+
PEER-REVIEWED PAPERS

- The world's largest residential energy research database.
- Innovative data privacy & security processes
- All available to academic and corporate researchers

Testing & Verification Lab

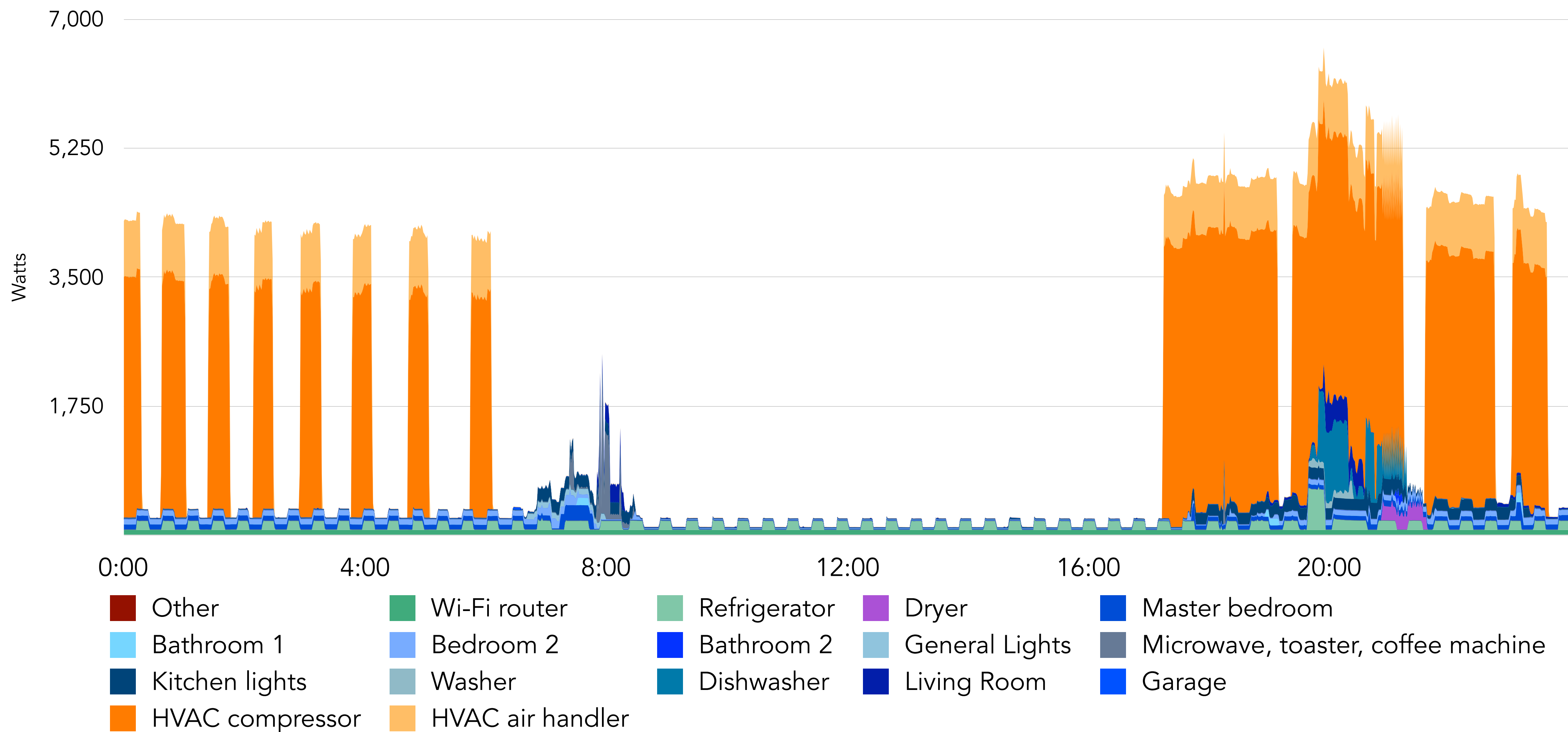


- Affordable concept and prototype testing center for smart residential energy solutions
- Allows for rapid product and market verification testings
- Texas's first grid-connected V2G testing center



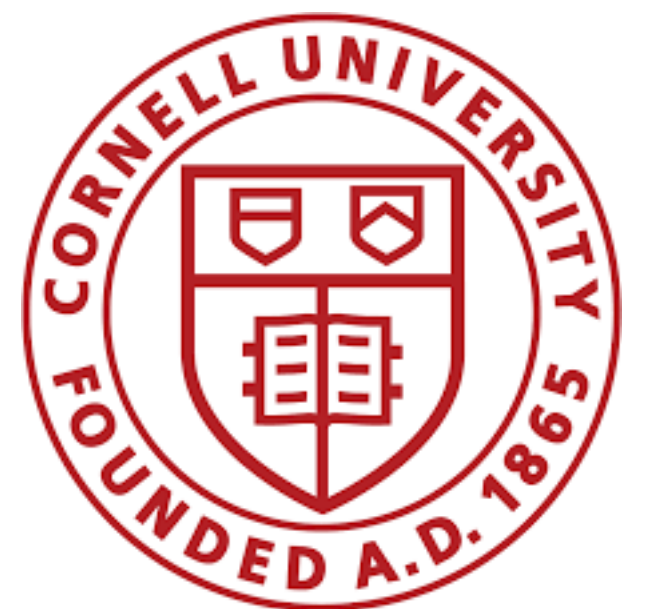
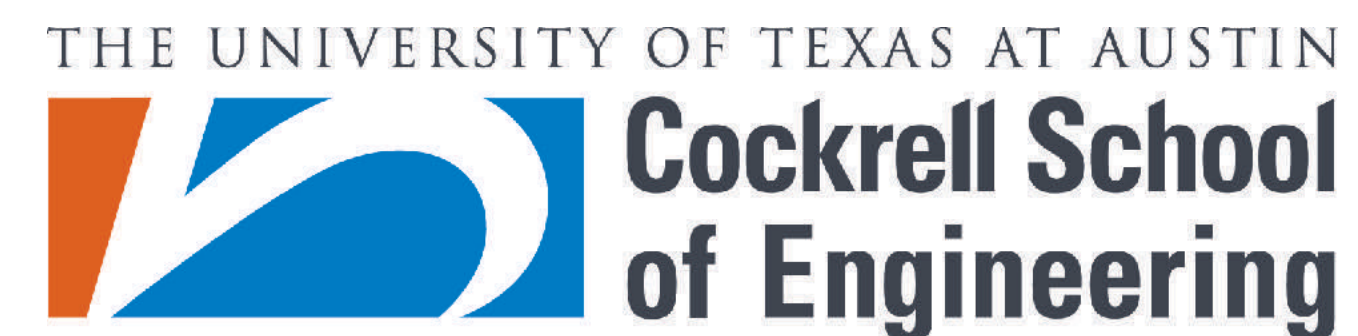
High resolution, disaggregated data

One-Minute, Circuit Level Data



American Sentinel University • Appalachian State University • Arizona State University • Bahria University • Bellarmine College Preparatory • Caltech • Carnegie Mellon University • Clemson University • Colorado State University • Columbia University • Copenhagen Business School • Cornell University • Dartmouth • Delhi University • Duke University • Georgia State University • Grand Valley State University • Illinois Institute of Technology • Indian Institute of Technology Madras • Institute for Advanced Studies in Basic Sciences • International Institute of Information Technology - Bangalore • KTH - The Royal Institute of Technology • Lancaster University • Masdar Institute of Science and Technology • MIT • Monash University • Monterey Institute of International Studies • Morgan State University • Mumbai University • National Chiayi University • National Taiwan University • National University of Ireland Galway • New Mexico State University • Northeastern University • Oregon State University • PEC University of Technology • Prairie View A&M University • Rock Valley College • San Antonio College • Shivaji University • Southern Methodist University • Stanford University • Syracuse University • Texas A&M University • Texas Tech University • Towson University • Umea University - Sweden • Universidad del Valle - Colombia • Universidad Politécnica de Madrid • Universitatea Politehnica Bucuresti • University College Cork, Ireland • University of Alberta • University of Calgary • University of California San Diego • University of California-Berkeley • University of California- Davis • University of Colorado - Boulder • University of Cyprus • University of Delaware • University of Dundee • University of Florida • University of Georgia • University of Madeira • University of Michigan • University of Minnesota - Minneapolis • University of Southampton • University of Southern Queensland • University of Tasmania • University of Texas at Arlington • University of Texas at Austin • University of Texas at San Antonio • University of Twente and TU Delft • University of Vermont • Virginia Tech • Virginia Tech Advanced Research Institute • Warwick University • Wayne State University • Yale University

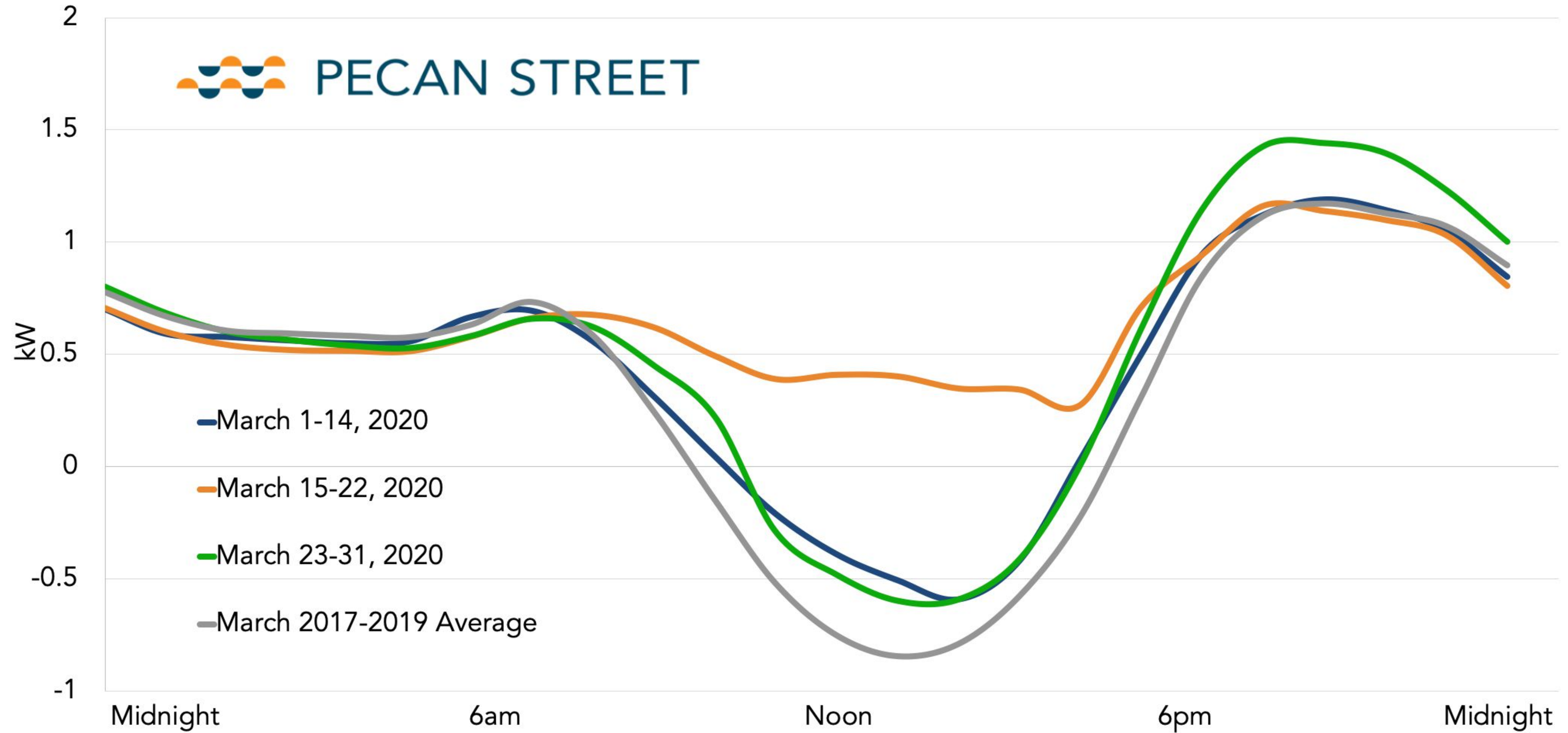
Partners





Scott Hinson, CTO, Pecan Street

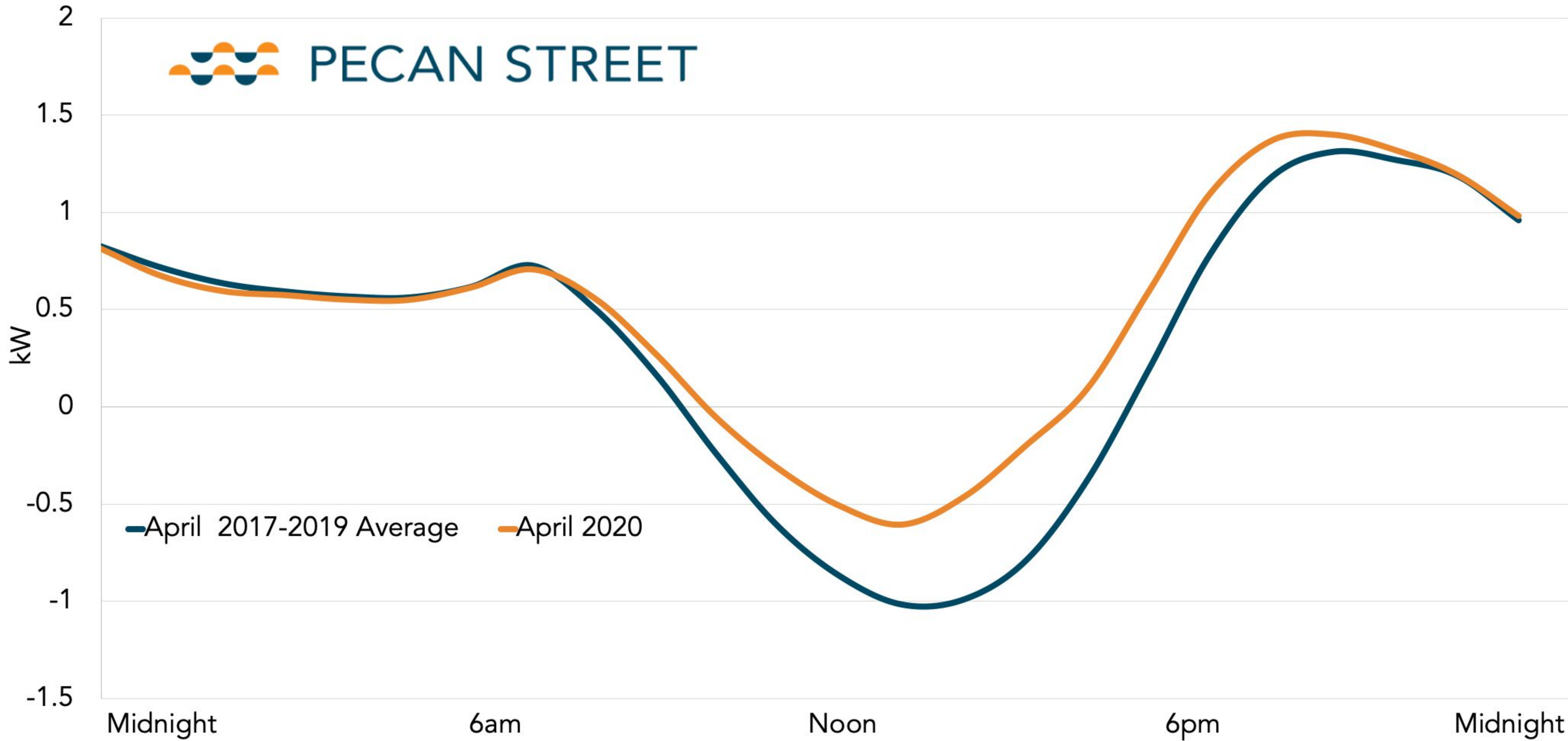
Sheltering in Place - A New Duck Curve – March 2020



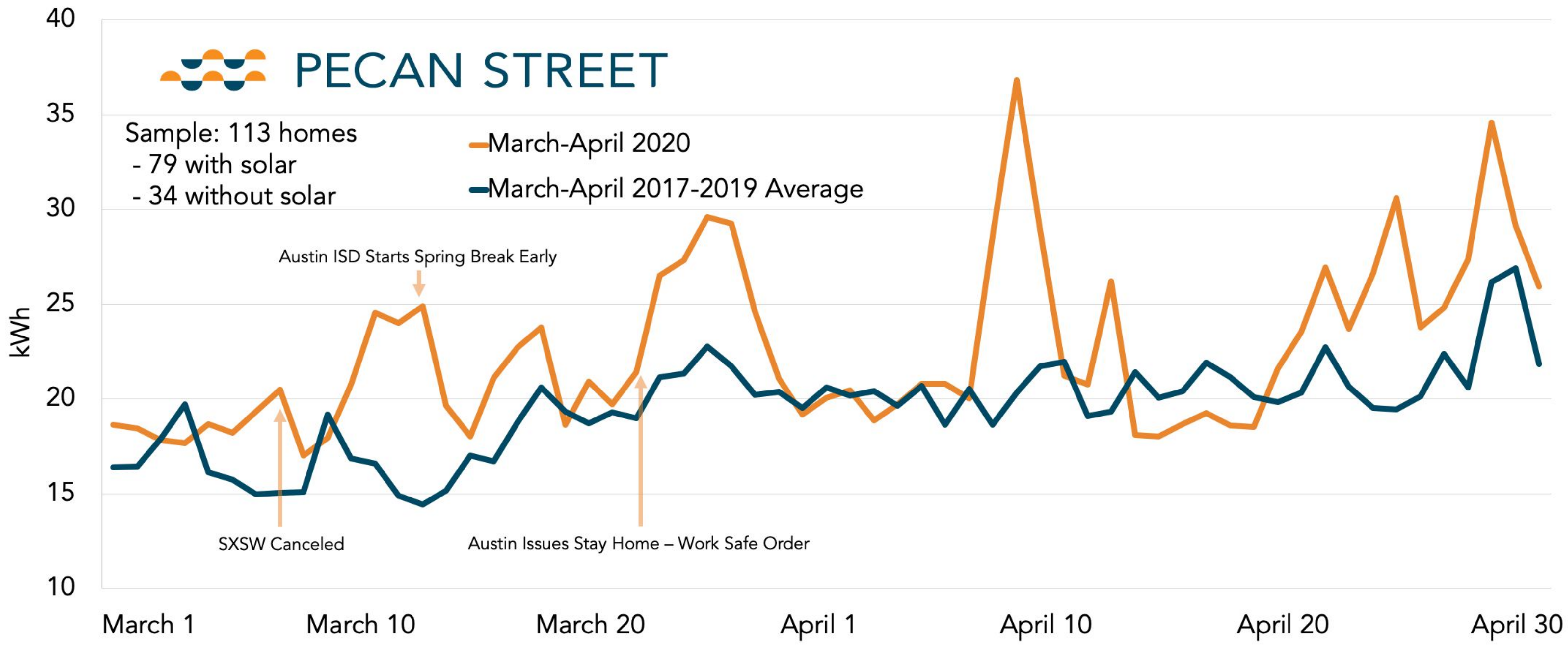
Sheltering in Place - A New Duck Curve – April 2020



PECAN STREET



Whole Home - Average Energy Demand, March-April 2020

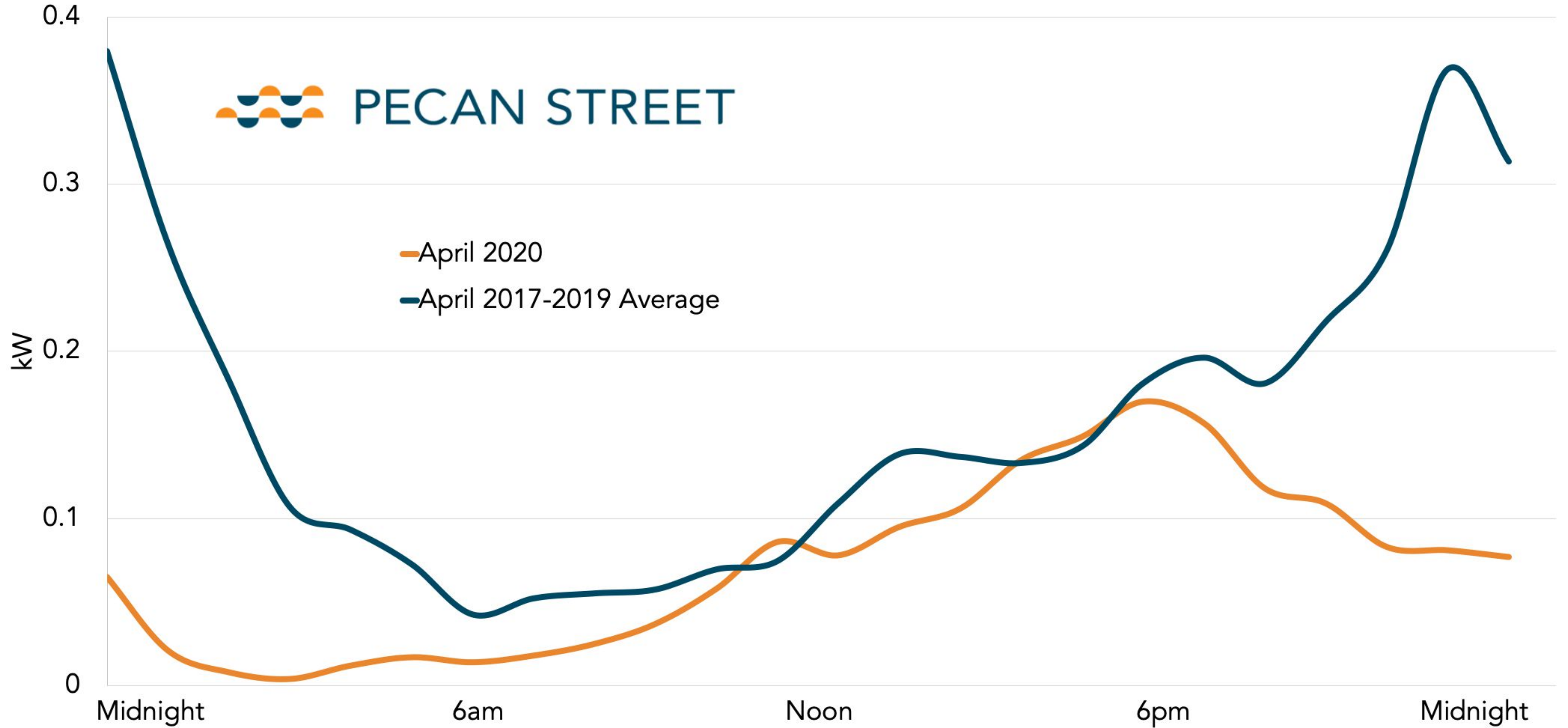


EV Charging – 5-Day Rolling Average



Sample: 50 homes with Level 2 EV Chargers

EV Charging – Hourly Demand



Sample: 33 homes with Level 2 EV Chargers

Accessories, Lighting and Appliances – Daily Average Demand (Excludes HVAC and EV Charging)



PECAN STREET

Sample: 113 homes
- 79 with solar
- 34 without solar

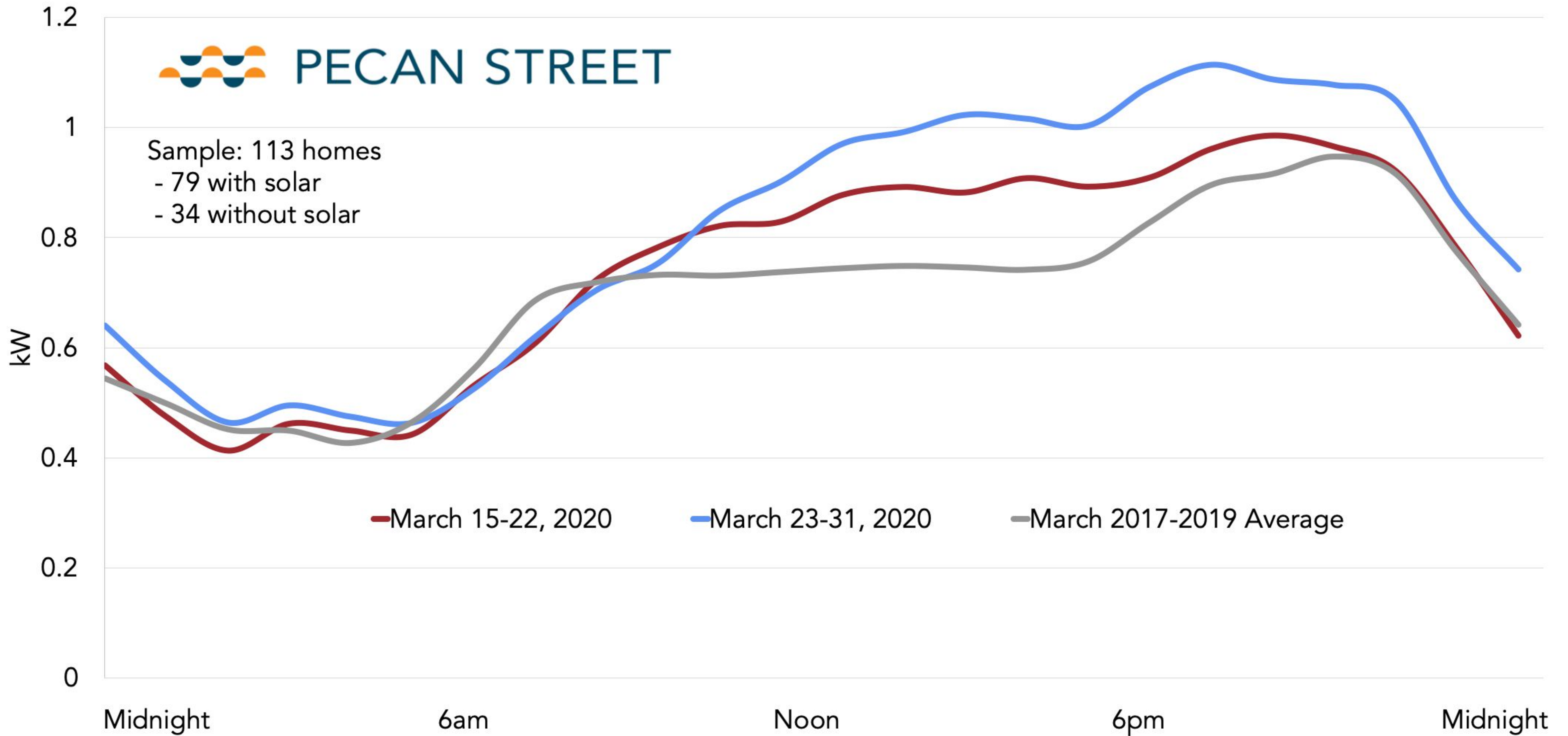


Accessories, Lighting and Appliances – Daily Average Demand (Excludes HVAC and EV Charging)



PECAN STREET

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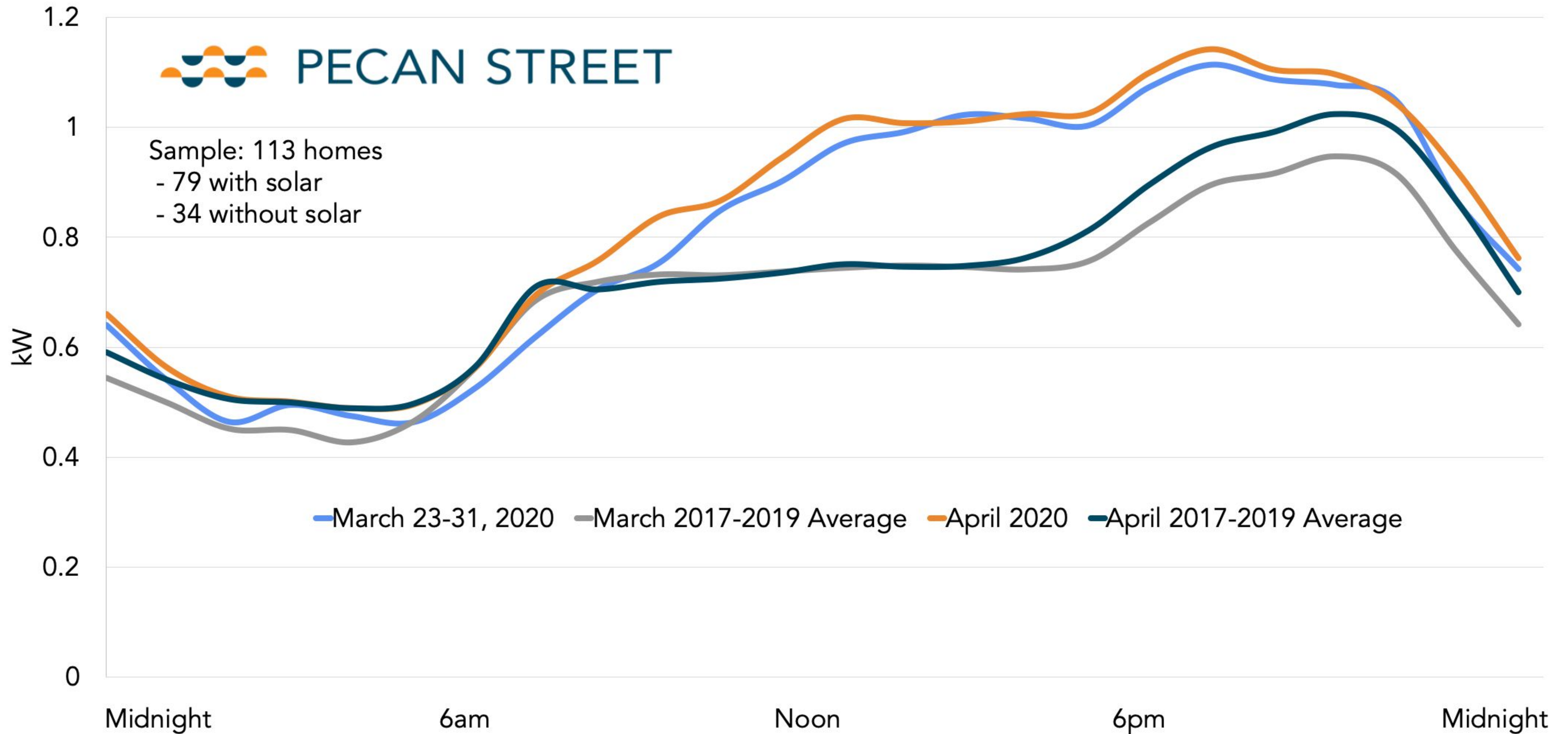


Accessories, Lighting and Appliances – Daily Average Demand (Excludes HVAC and EV Charging)



PECAN STREET

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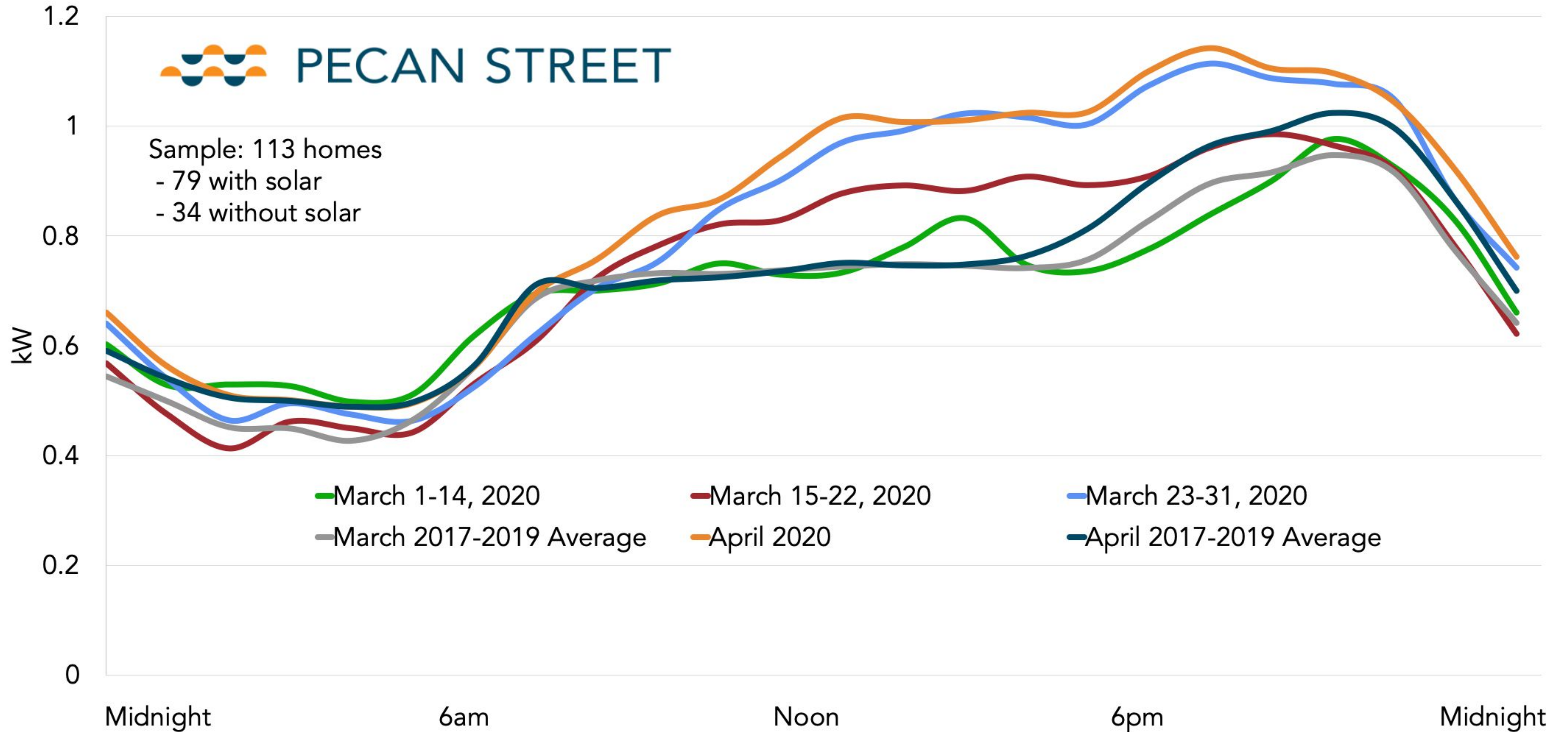


Accessories, Lighting and Appliances – Daily Average Demand (Excludes HVAC and EV Charging)



PECAN STREET

Sample: 113 homes
- 79 with solar
- 34 without solar



HVAC - Average Daily Demand, March-April 2020



PECAN STREET

Sample: 100 homes

March-April 2020

March-April 2017-2019 Average

kWh

SXSW Canceled

Austin ISD Starts Spring Break Early

Austin Issues Stay
Home – Work Safe
Order

March 1

March 10

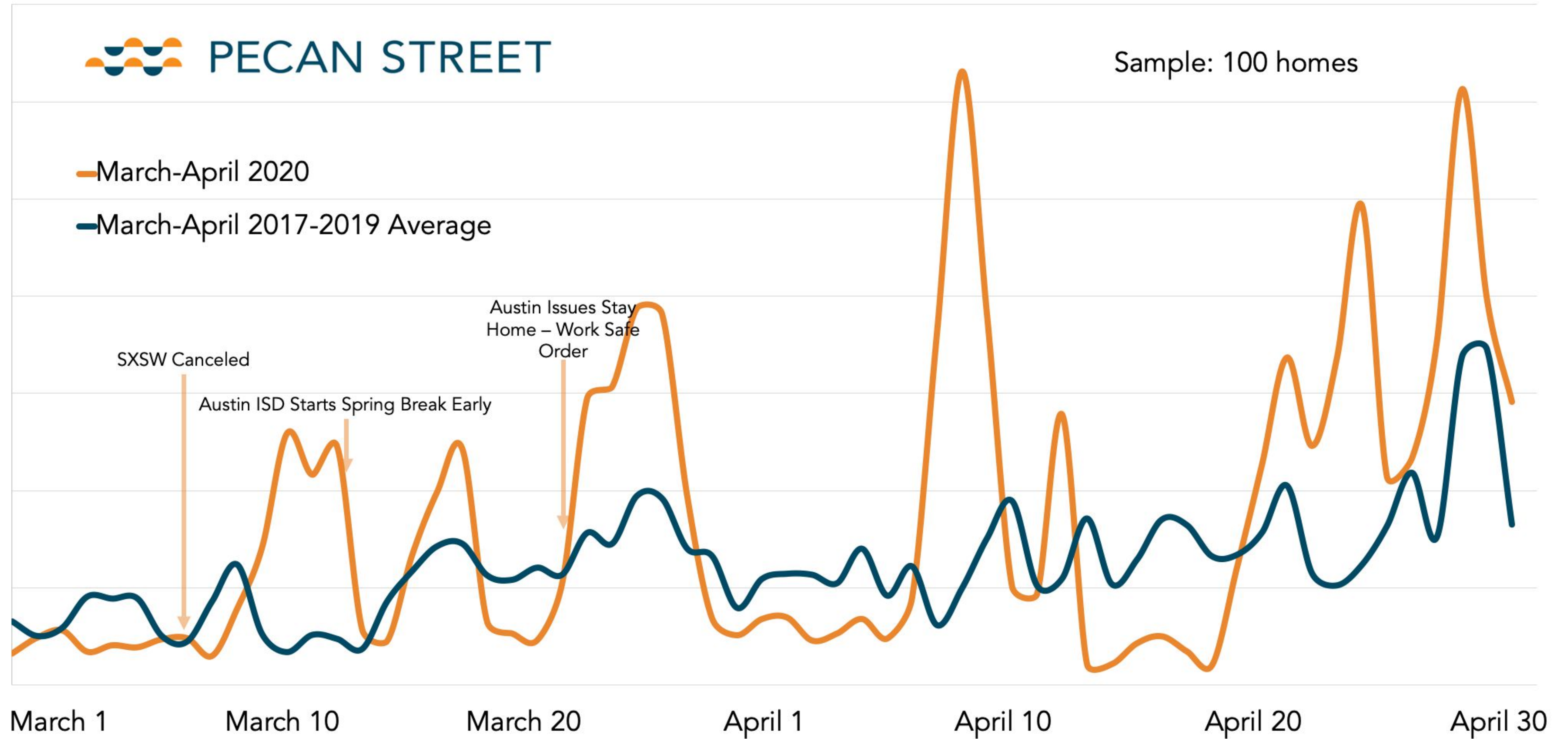
March 20

April 1

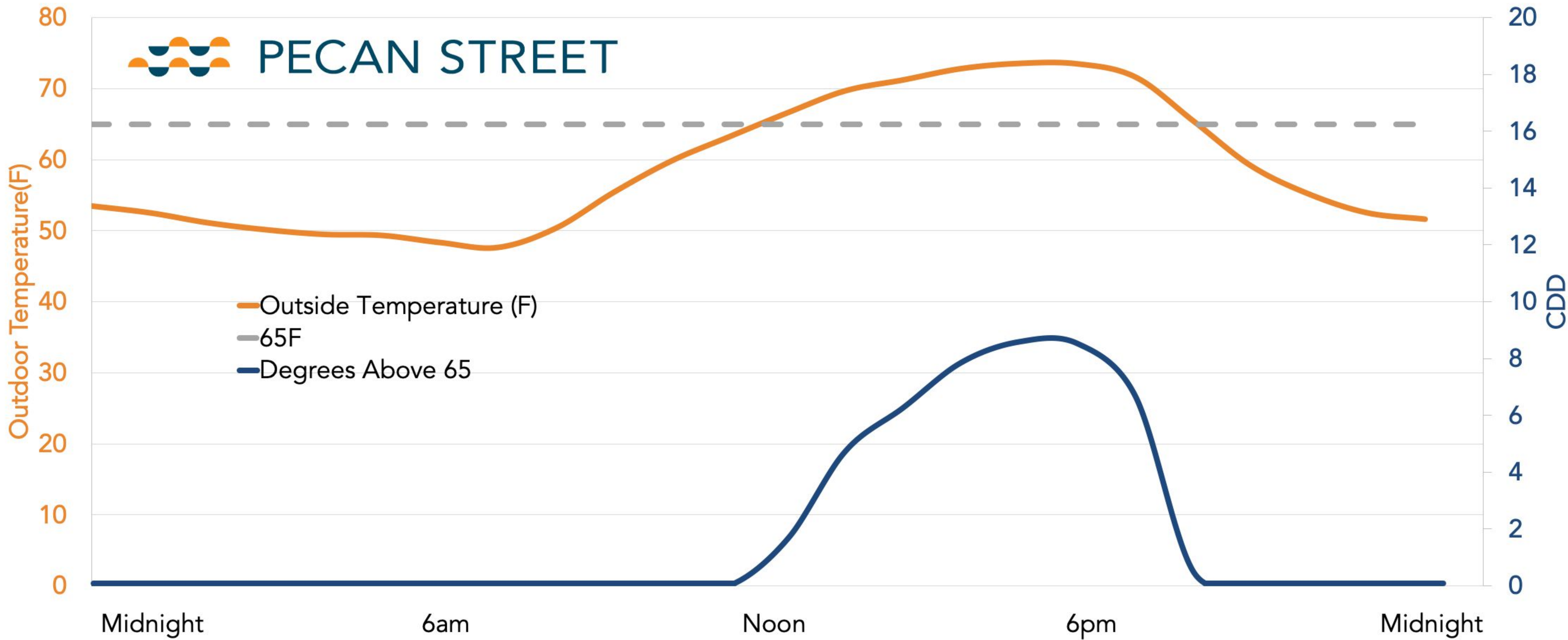
April 10

April 20

April 30



Cooling Degree Day – March 2020

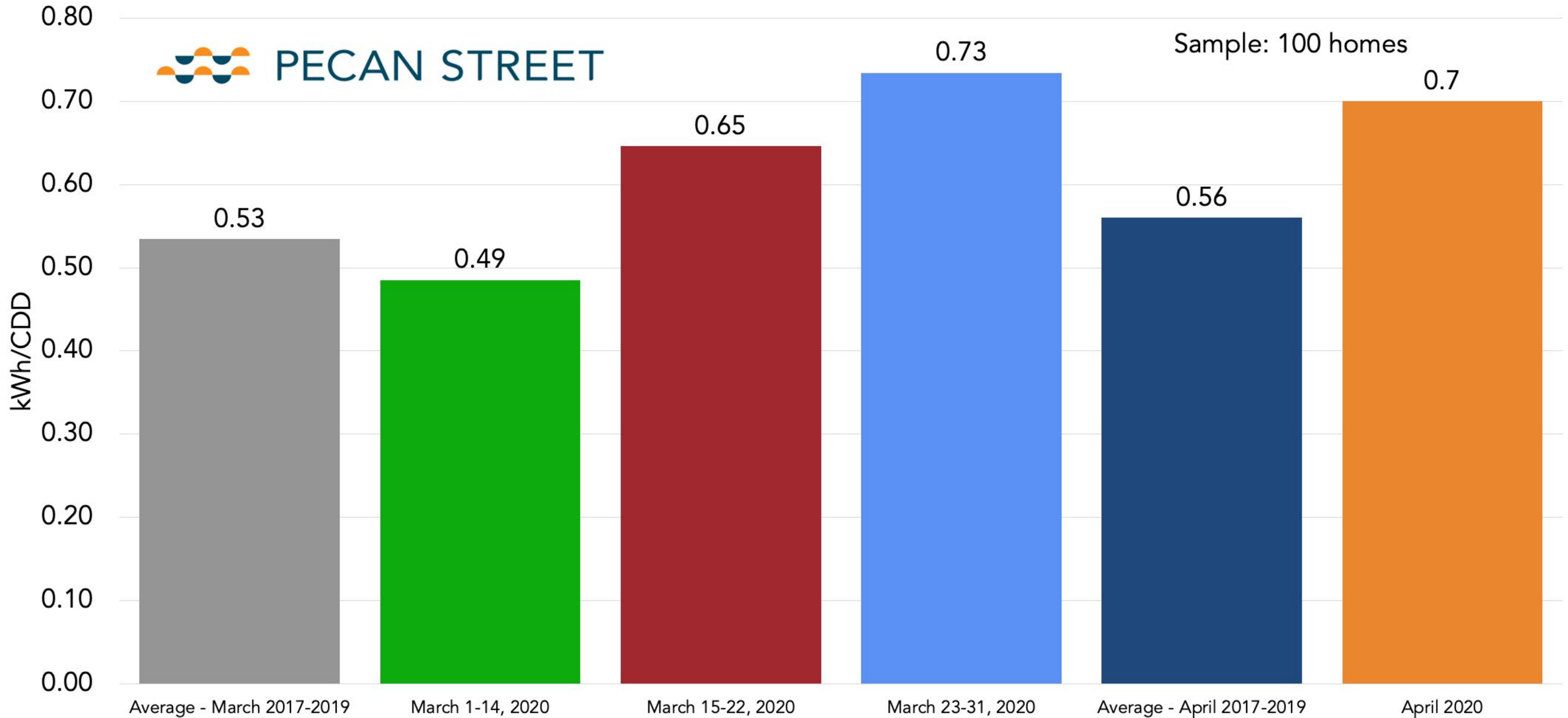


HVAC Demand Per Cooling Degree Day

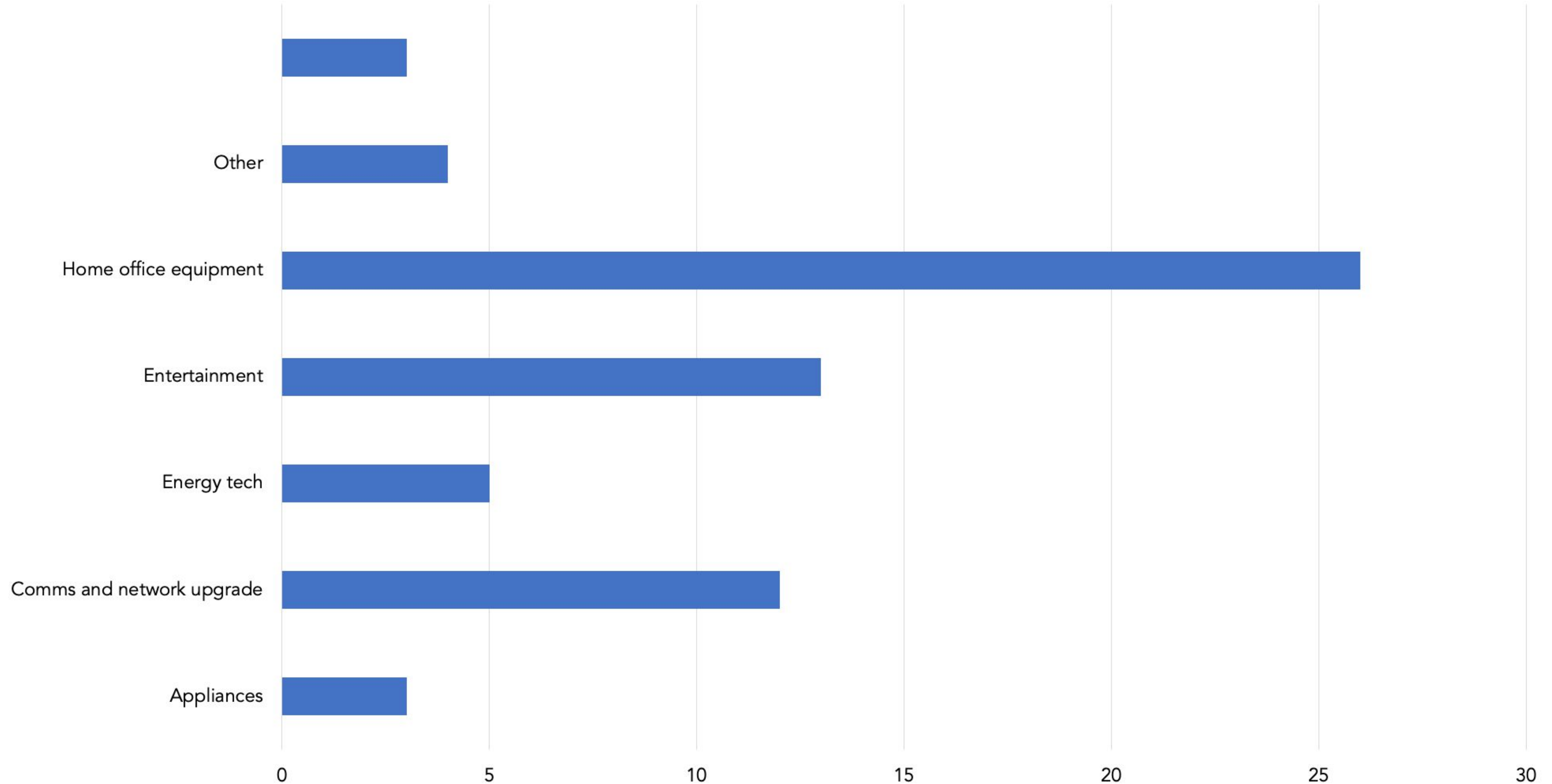


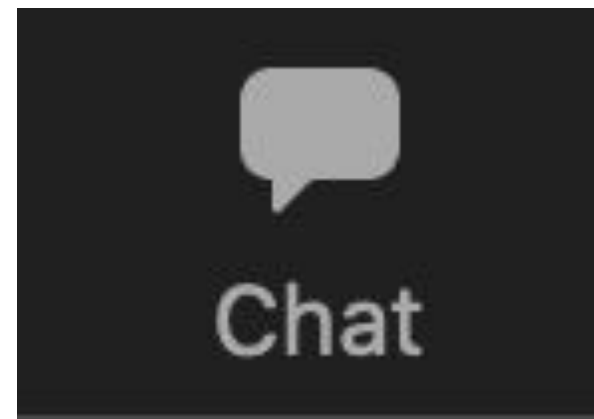
PECAN STREET

Sample: 100 homes

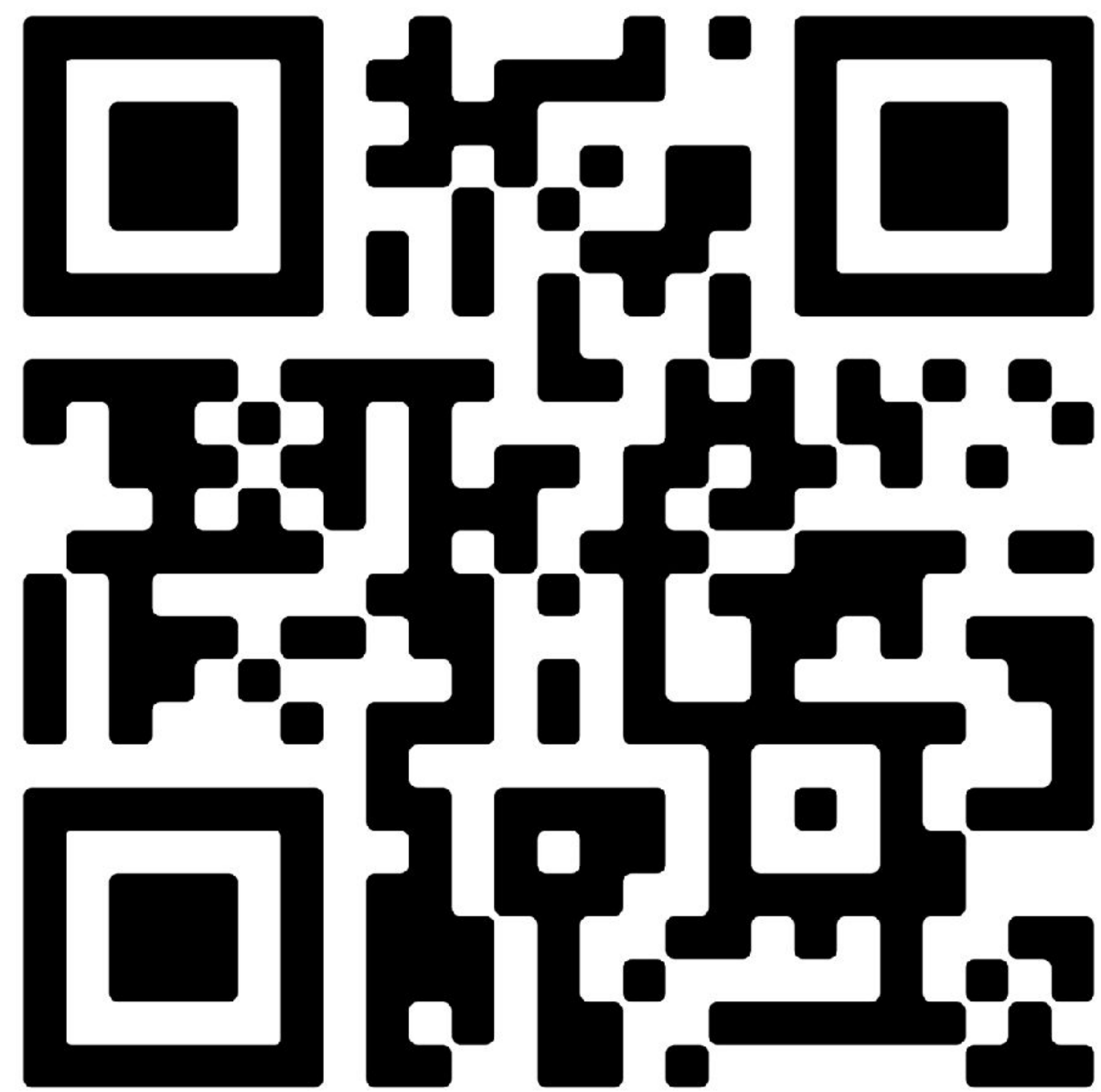


Which technologies have you purchased to ease sheltering at home?





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Thank You