

DOCKETED

| | |
|-------------------------|--|
| Docket Number: | 19-OIR-01 |
| Project Title: | Load Management Rulemaking |
| TN #: | 231533 |
| Document Title: | Presentation - Power Your Drive - An Hourly Dynamic Rate Design |
| Description: | Presentation by Cyndee Fang on the retail rate design for SDG&E's Power Your Drive electric vehicle tariff |
| Filer: | Karen Herter |
| Organization: | SDGE |
| Submitter Role: | Public |
| Submission Date: | 1/15/2020 12:05:59 PM |
| Docketed Date: | 1/15/2020 |

Power Your Drive: An Hourly Dynamic Rate Design



CEC Load Management Rulemaking Workshop
January 14, 2020



Cyndee Fang, Manager of Energy Research & Analysis



The Utility System

Generation/Commodity:

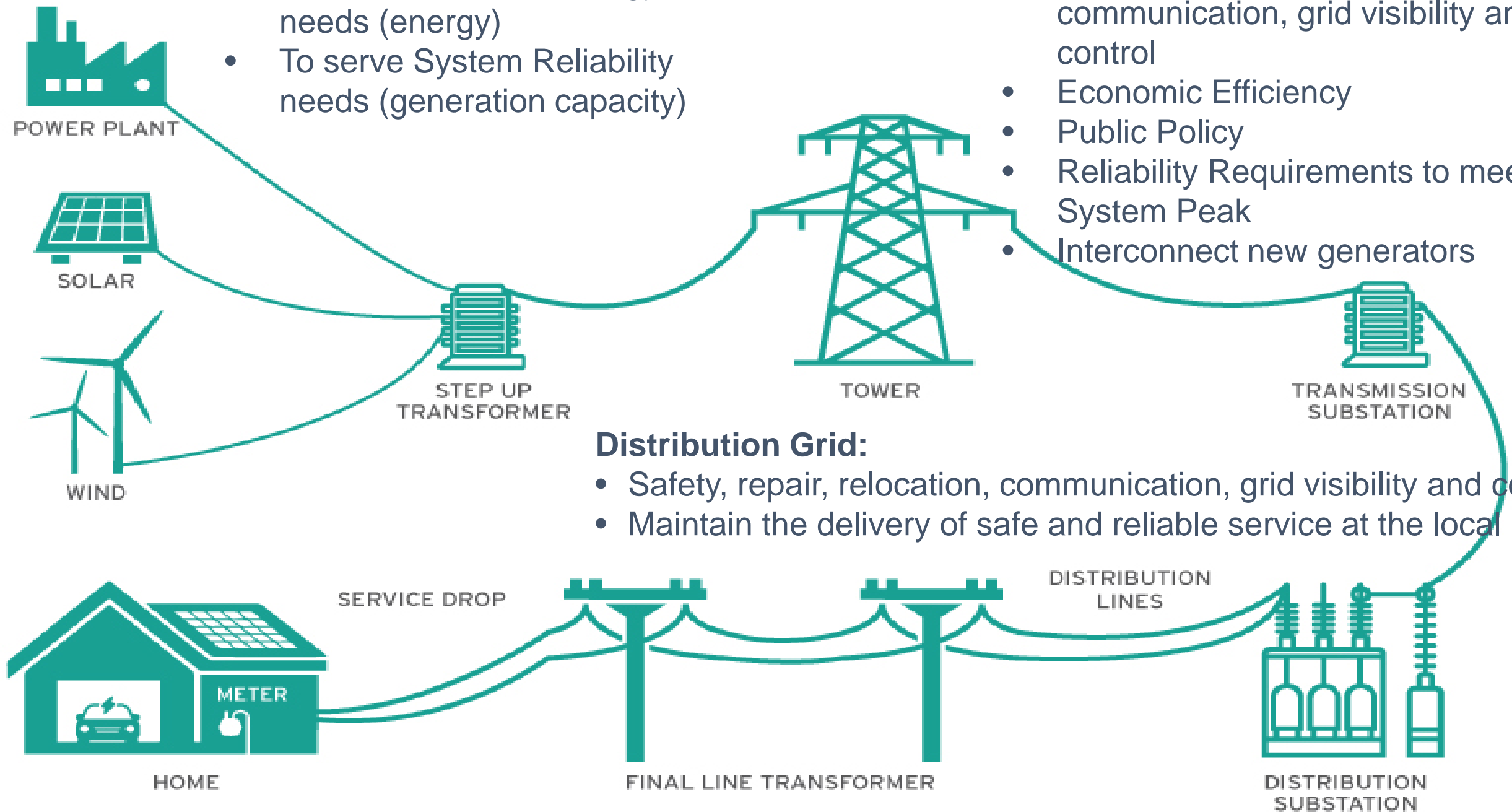
- To serve customer energy needs (energy)
- To serve System Reliability needs (generation capacity)

Transmission:

- Safety, repair, relocation, communication, grid visibility and control
- Economic Efficiency
- Public Policy
- Reliability Requirements to meet System Peak
- Interconnect new generators

Distribution Grid:

- Safety, repair, relocation, communication, grid visibility and control
- Maintain the delivery of safe and reliable service at the local level

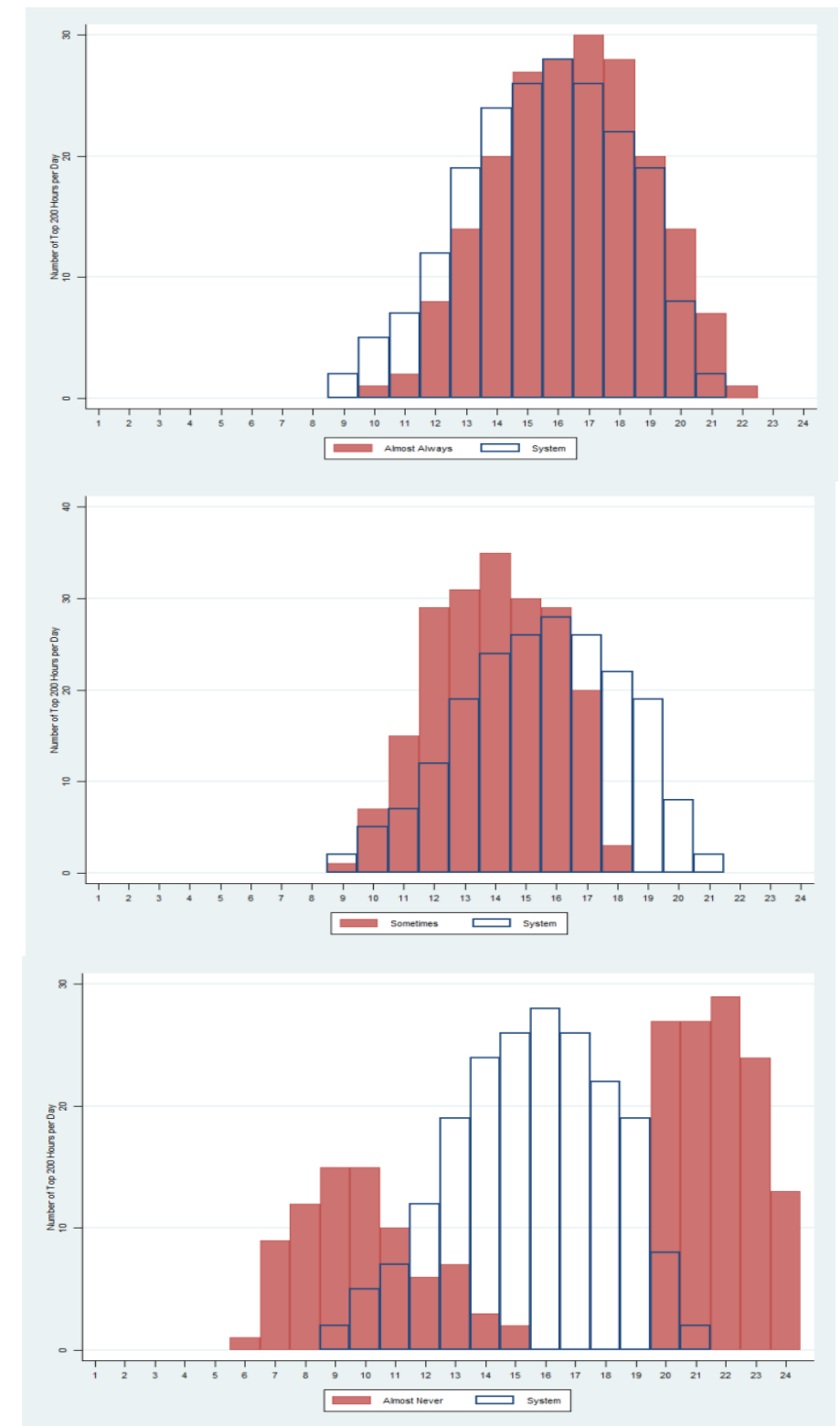
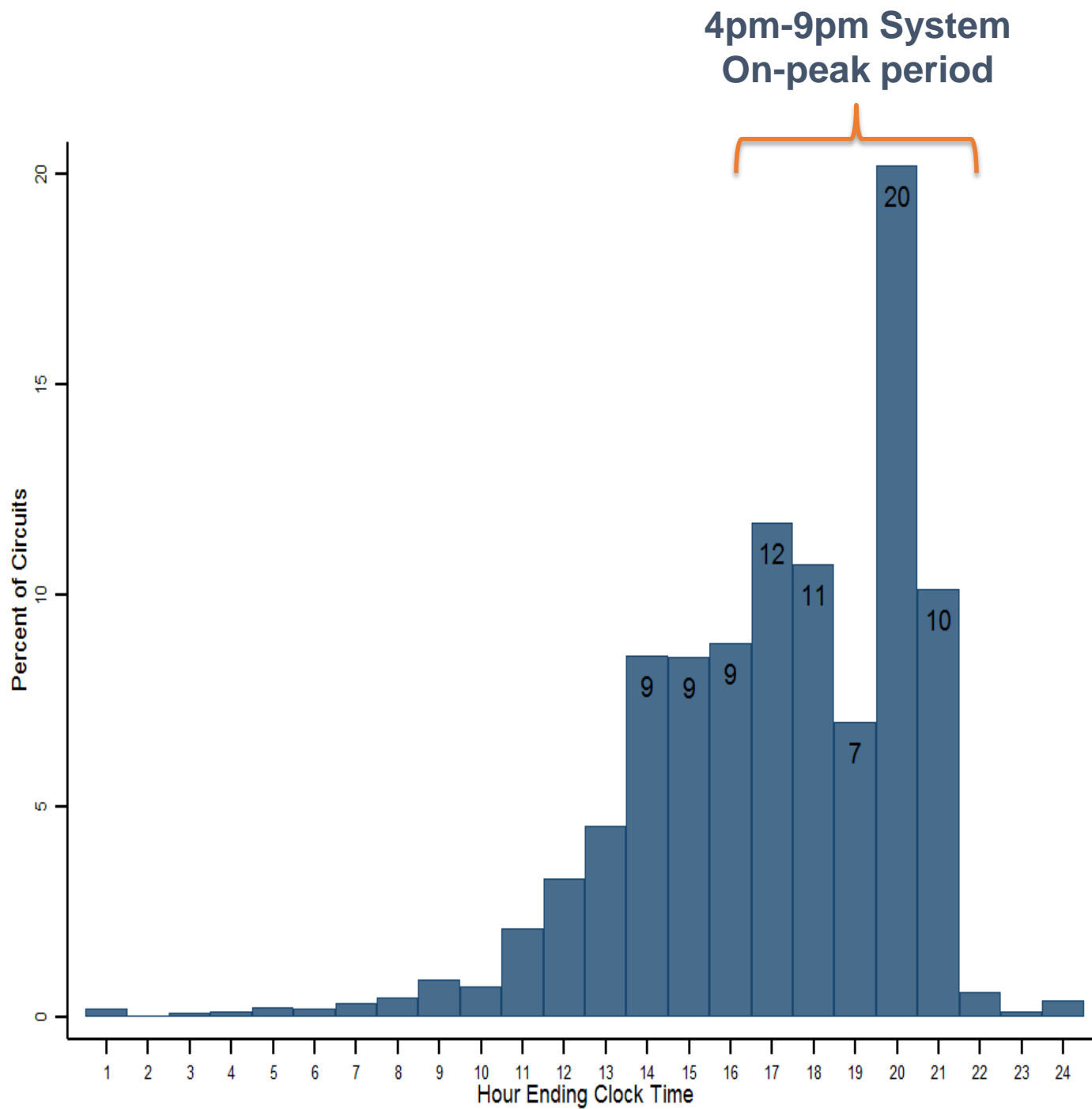


Customer Set-up:

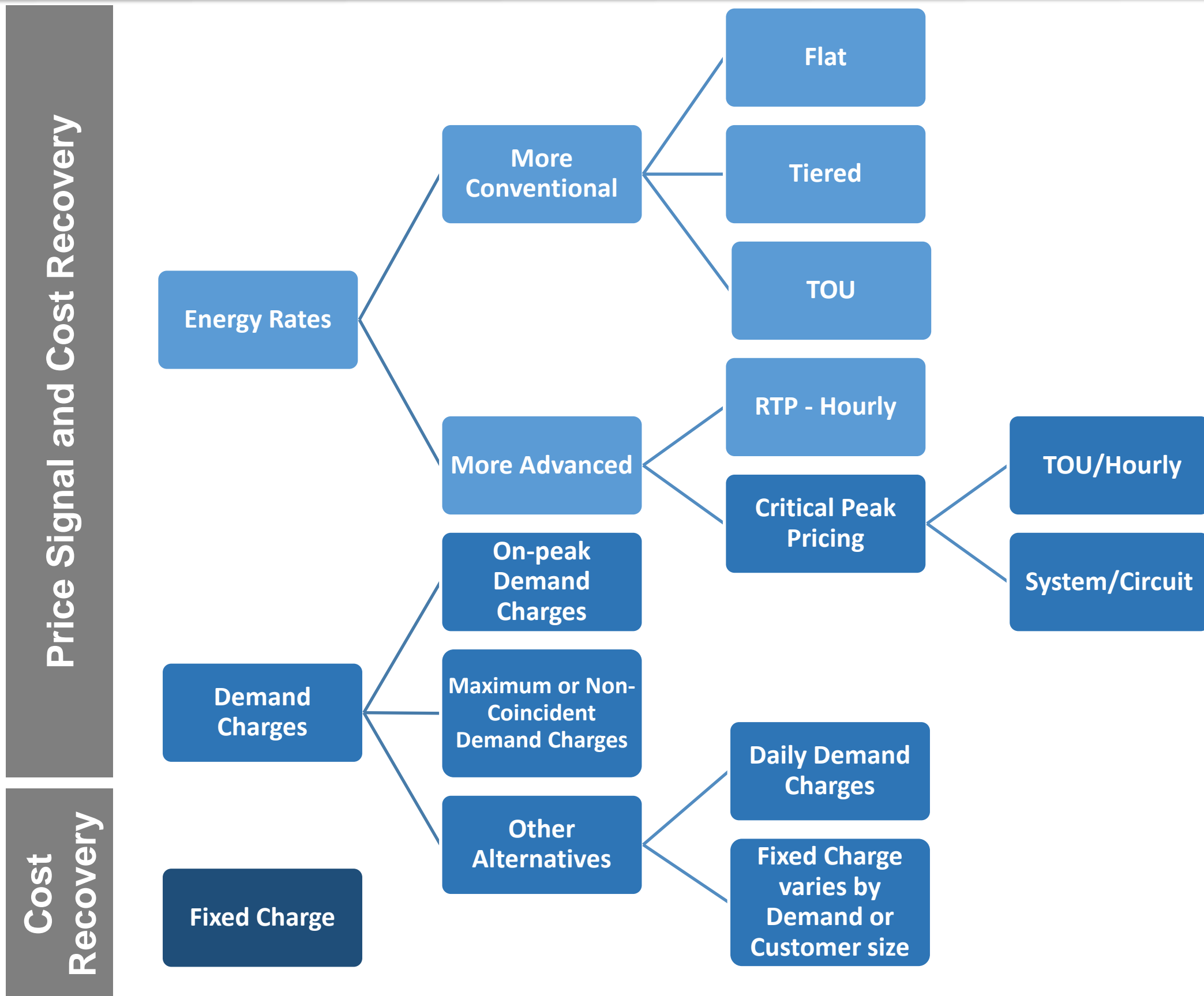
- To ensure customers are ready to receive energy services

Comparison of System and Circuit Peaks

The timing of circuit peaks may not align with system peak



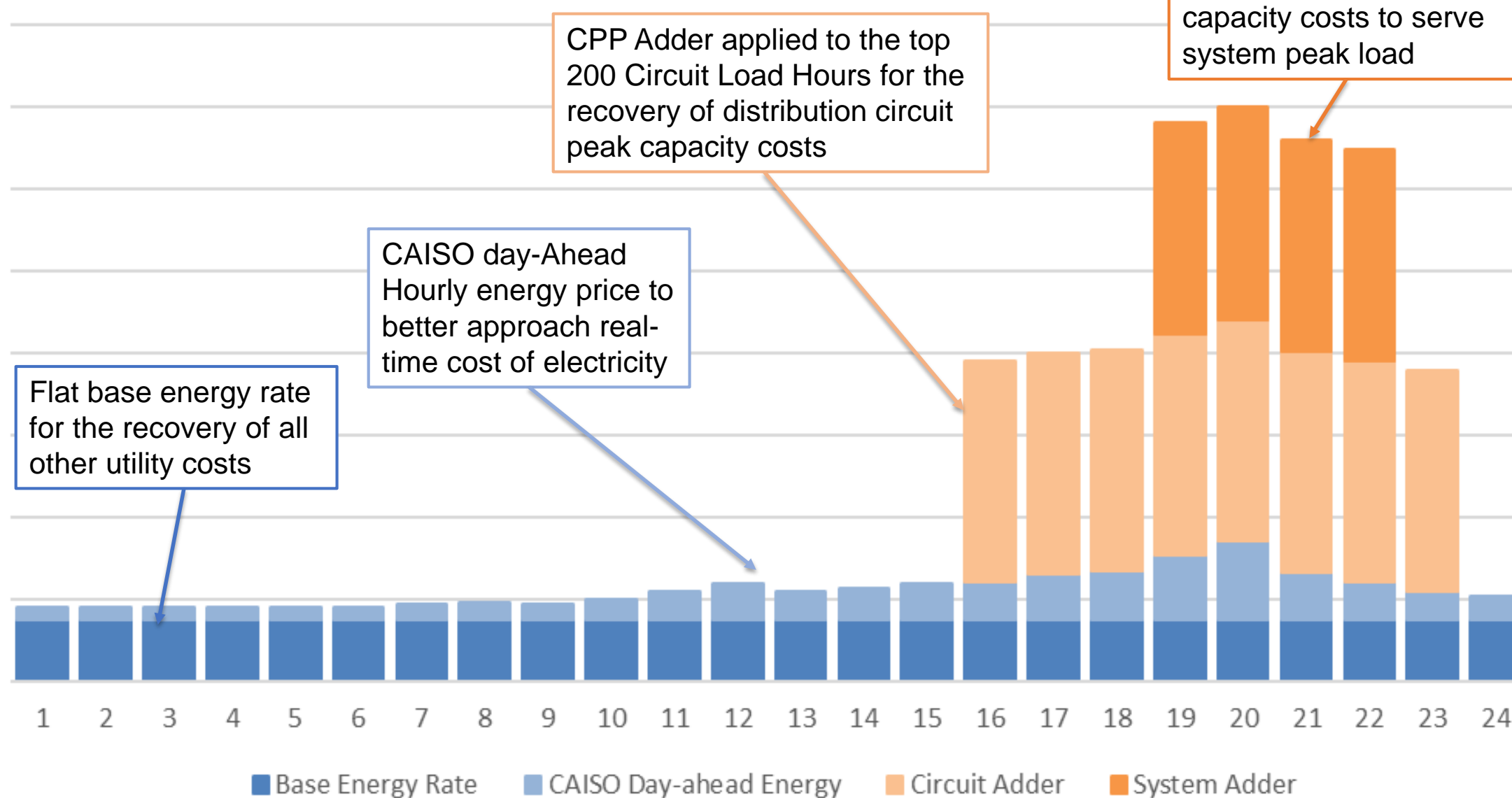
Rate Design Tools



Design of an Hourly Dynamic Rate

Advanced technologies partnered with more complex and granular rate design can create more opportunities for low cost hours

Illustrative Hourly Dynamic Rate



CPP Adder applied to the top 200 Circuit Load Hours for the recovery of distribution circuit peak capacity costs

CPP Hourly Adders applied to the top 150 System Load Hours for the recovery of generation capacity costs to serve system peak load

CAISO day-Ahead Hourly energy price to better approach real-time cost of electricity

Flat base energy rate for the recovery of all other utility costs

CPP is an energy rate option that provides a “capacity” price signal

Circuit-level CPP provides a locational price signal while preserving customer equity by still charging all customers the same price