
Standby Rate Design Principles

A Utility Perspective

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NARUC Electricity Committee Meeting

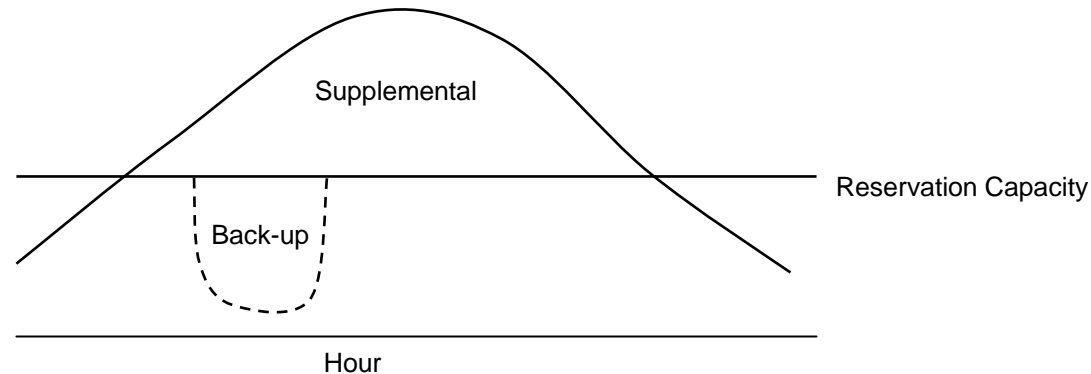
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Standby Rates

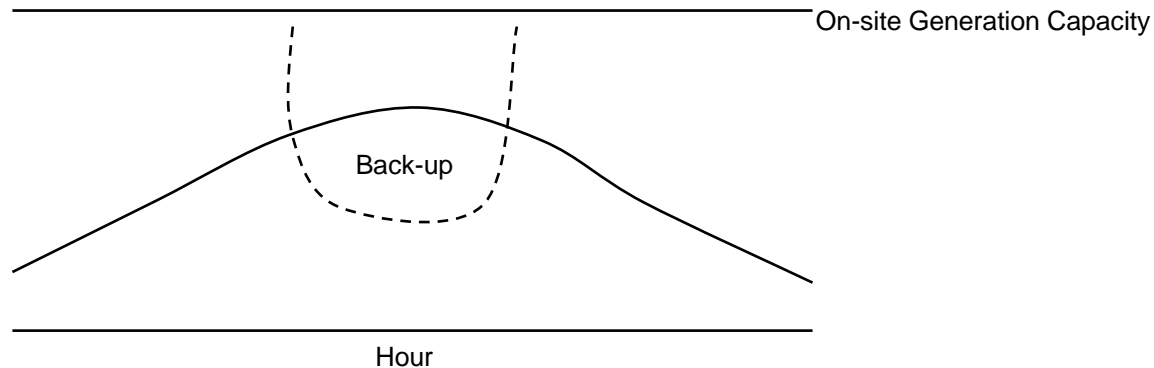
- Applicable to customers using on-site generation facilities that are interconnected to and operate in parallel with the utility's distribution system
 - Like all other rates, standby rates should reflect full cost of service and not create artificial barriers to on-site generation
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Standby Rate Design

- Power provided to standby customers should be separated into Supplemental, Back-up and Maintenance Power



- Some Standby customers only use Back-up or Maintenance Power



Standby Rate Design (continued)

- Back-up $\text{kW}_i = \text{Reserved kW} - \text{Gen}_i$

$$0 \text{ kW} \leq \text{Back-up kW}_i \leq \text{Metered kW}_i$$

$$\text{Supplemental kW}_i = \text{Metered kW}_i - \text{Back-up kW}_i$$

- Maintenance Power is similar to Back-up Power but is scheduled with and approved by the utility
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Charges for Standby Customers

■ Supplemental Power

- Charged at the otherwise applicable tariff

■ Back-up Power

- Reservation Capacity Charge
 - A portion of Transmission and Distribution (T&D) system is being held available to provide standby service
 - Customer should establish its reservation capacity, but it should be ratcheted up if back-up load exceeds it
 - Designed to recover fixed cost of facilities dedicated to customer's use
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Charges for Standby Customers (continued)

- Variable (\$/kWh) Distribution Charge
 - Designed to recover Peak-demand related distribution costs after adjusting for diversity of Back-up Load
 - Commodity Charges
 - \$/kW charge for generation capacity (by TOU)
 - \$/kWh charge based on market price of energy or utility's TOU-differentiated energy rates
 - Maintenance Power
 - Same as back-up power except for the variable \$/kWh distribution charge
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Other Issues

- Diversity of Back-up load
 - Exists at transmission voltage
 - Questionable at distribution circuit level for several reasons
 - Physical Assurance
 - If provided, should result in exemption from Reservation Capacity Charge
 - Claimed Benefits of On-site Generation
 - Deferral of distribution capacity upgrades
 - Extension of distribution equipment life
 - Supply of Reactive Power
 - Energy supply cost reduction
 - National security benefit
 - Need for Net Generation Output Metering
 - Pattern of on-site generation outages
 - Reliability-based charges
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Exemptions

- Although in California significant time was spent on proper design of standby rates, legislature exempted new on-site generation from standby rates
 - CHP of 5MW or smaller that complies with emission standard adopted by the State ARB exempt until June 1, 2011 and can be served under OAT
 - Solar and wind generation, or a hybrid system of both, eligible for net metering
 - Bio-gas digester of 1 MW or less (up to 50 MW)
 - Fuel cell of 1MW or less
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