

Electric Unbundling Concepts

Pacific Gas and Electric Company

April 15, 1996

Unbundling Objectives

Primary

- Unbundle costs sufficient to accommodate:
 - Direct Access
 - Implementation of ISO and WEPEX
- Ensure that unbundling results in no cost shifting

Secondary:

- Consider unbundling other costs only to the extent that first order objectives are satisfied

Costs/Services That Must Be Unbundled

- Energy
- Transmission/ISO
- Distribution
- Public Benefits Programs
- CTCs

Other Items That Could Be Unbundled

- Billing
- Metering
- Hookups
- Power Quality
- Line Extensions
- etc.

Unbundling Scenarios

Cost/Service

Energy
Transmission/ISO
Distribution
Public Benefits

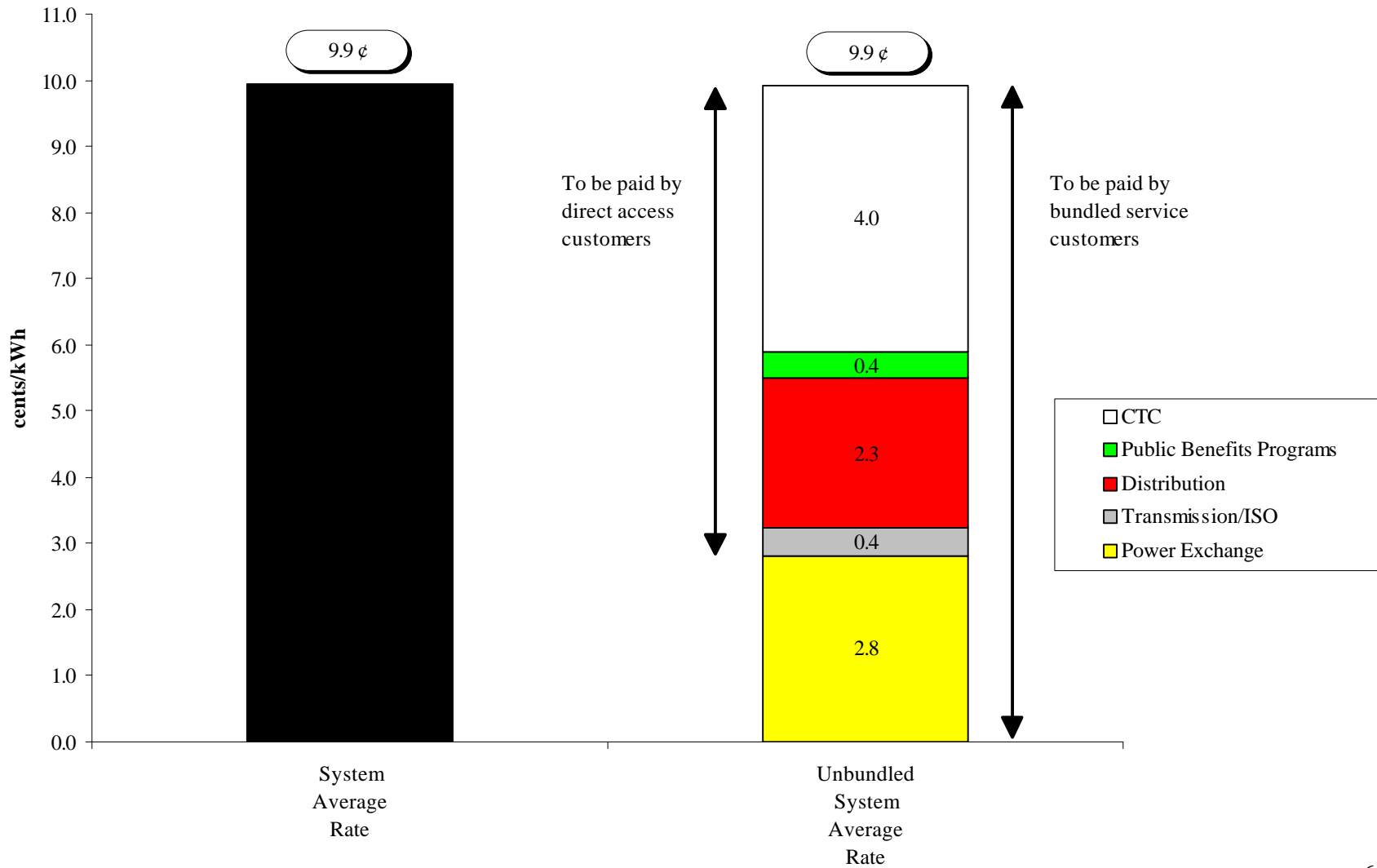
Allocation Method

Power Exchange
FERC Method
EPMC
SAPC

CTCs:

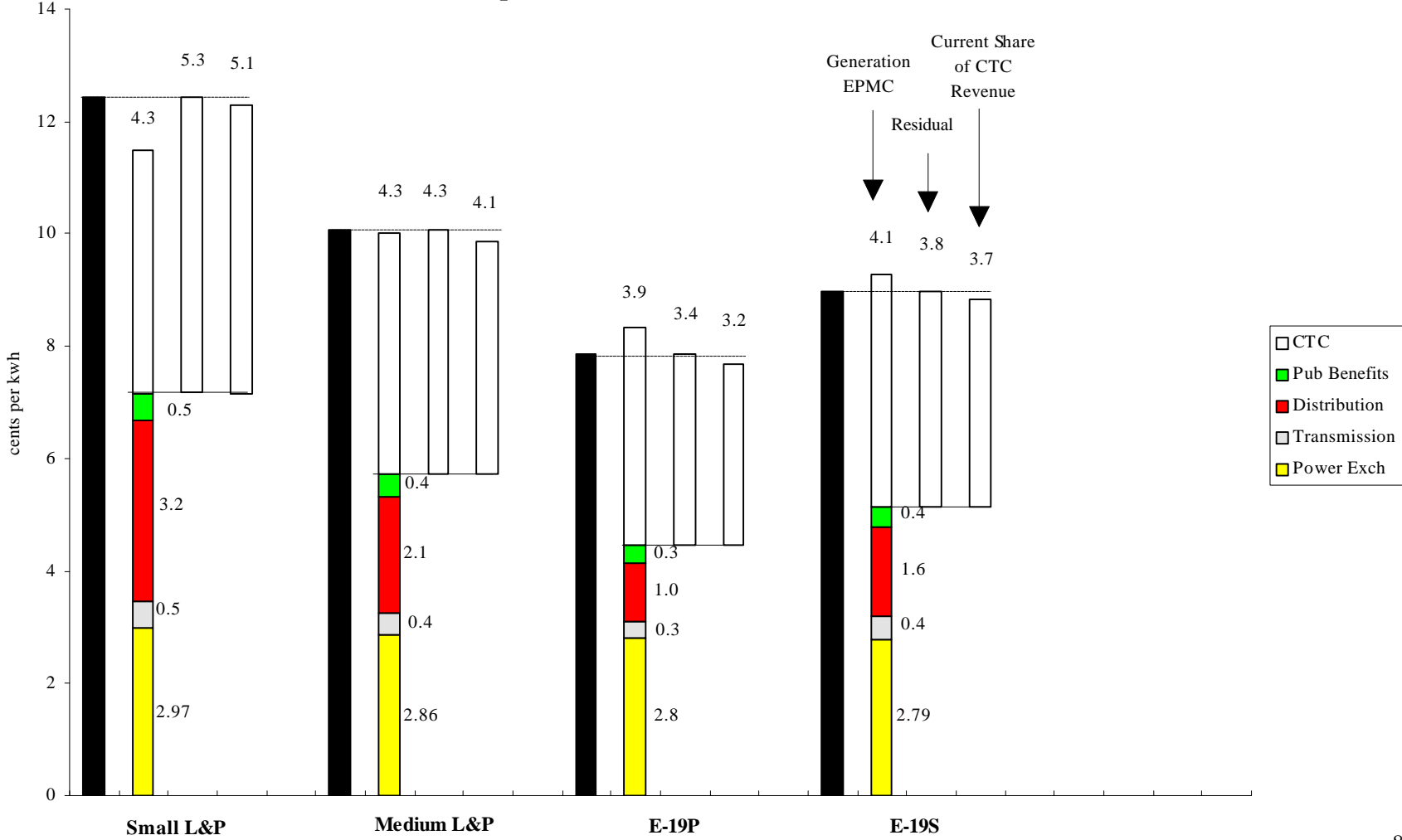
- Current Share of CTC Rev
- Generation EPMC
- Residual
- Others

Pacific Gas & Electric Company
Unbundled System Average Rate
Rates Effective 1/1/96

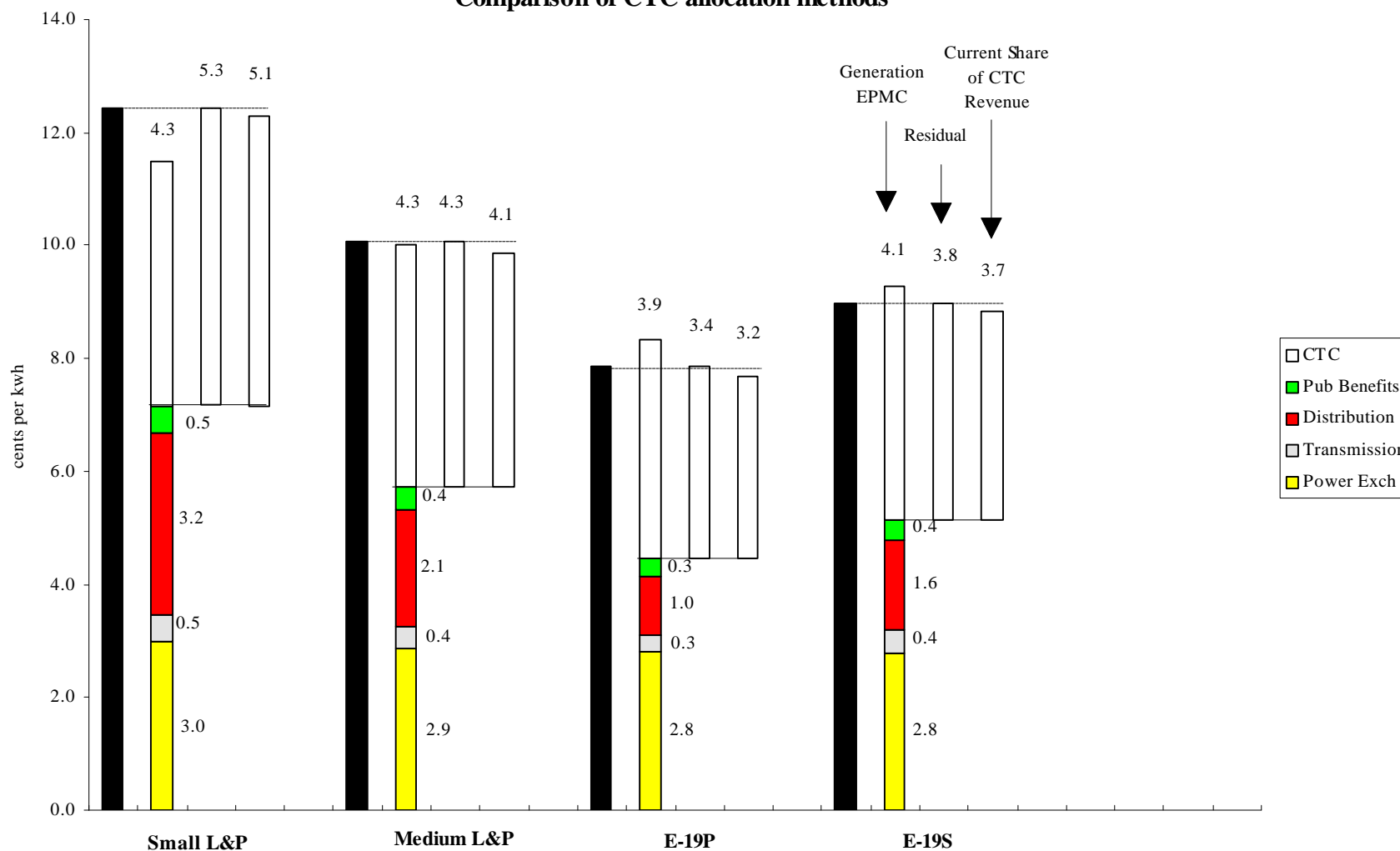


Results Of Scenarios

**Pacific Gas and Electric Company
1/1/96 Unbundled Rates
Comparison of CTC allocation methods**



**Pacific Gas and Electric Company
1/1/96 Unbundled Rates
Comparison of CTC allocation methods**



Only One Scenario Meets “No Cost Shifting” Objective

- Set CTC residually

Next: How to Reflect Cost of Unbundled Components on Customer Bills

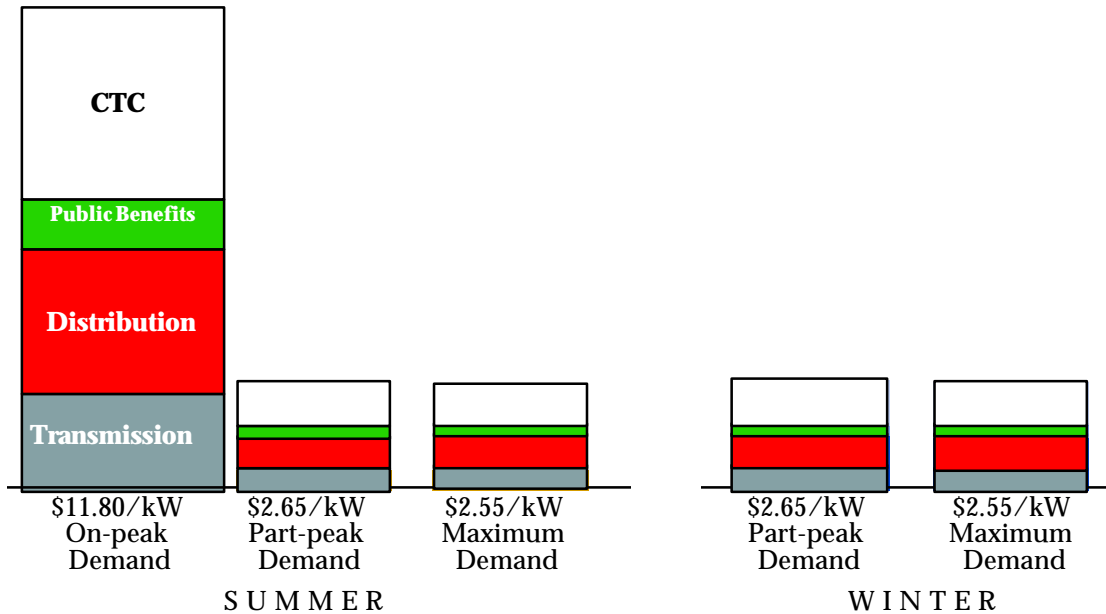
Options:

1. Break out charges for each component on tariff
2. Express cost of each component as a percent of total bill
3. Combination of 1 and 2

Illustrative Unbundled Charges E-20 Primary

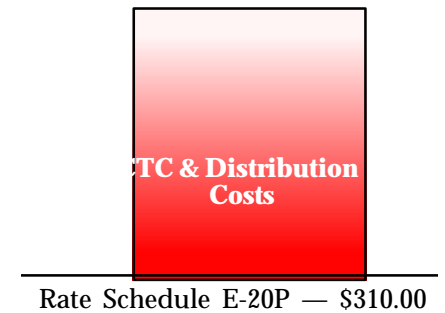
Demand Charges

31.5%
of a typical
customer's
annual bill



Fixed Monthly Customer Charge

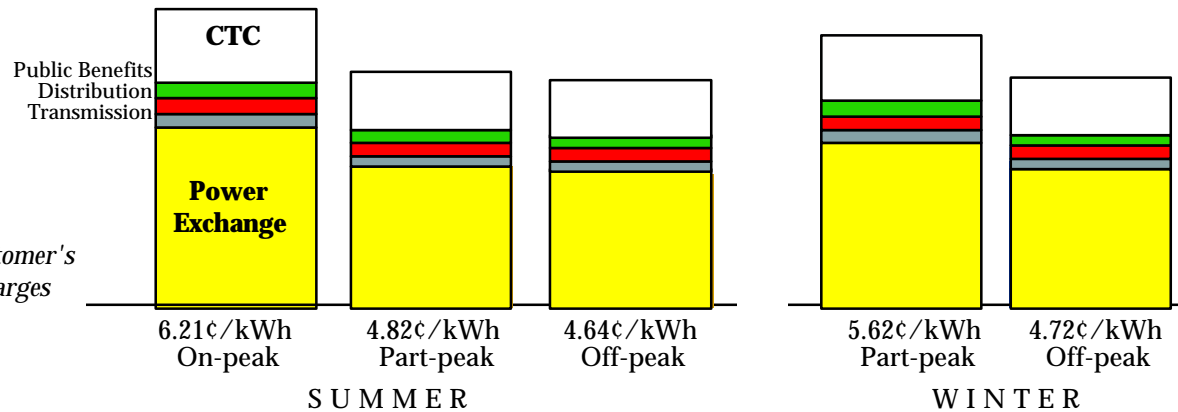
0.3%
of a typical customer's
total annual bill



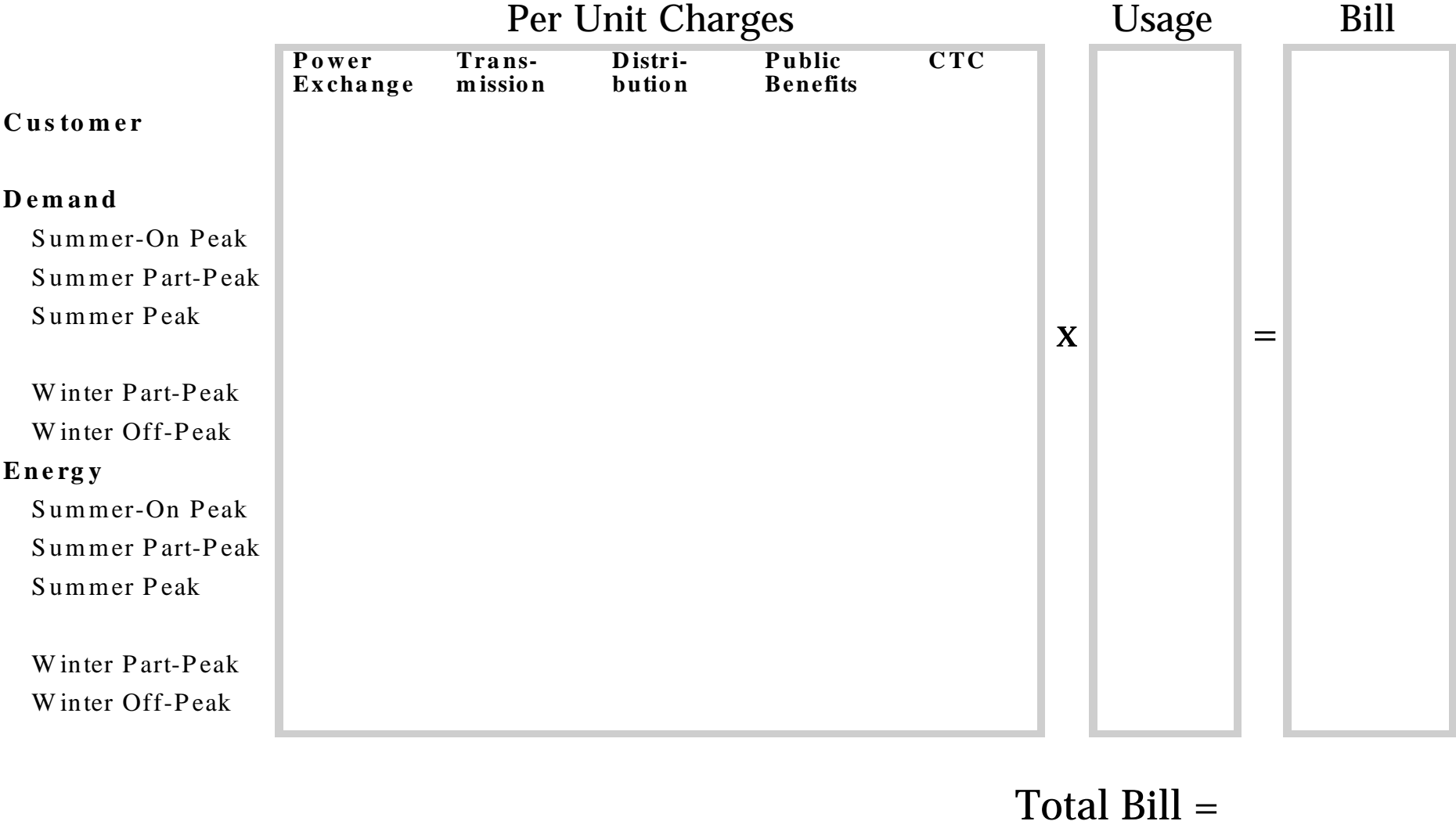
Rate Schedule E-20P — \$310.00

Time-of-Use Energy Charges

68.2%
of a typical customer's
total annual charges



Possible Bill Format



Alternative Bill Format

	Per Unit Charges	Usage	Bill
Customer	310	1	\$310
Demand			
Summer On-Peak	11.8	2,000	\$141,600
Summer Part-Peak	2.65	2,000	\$31,800
Summer Off-Peak	2.55	2,000	\$30,600
Winter Part-Peak	2.65	2,000	\$31,800
Winter Off-Peak	2.55	2,000	\$30,600
Energy			
		x	=
Summer On-Peak	0.0621	1,200,000	\$74,520
Summer Part-Peak	0.04821	1,380,000	\$66,530
Summer Off-Peak	0.04637	3,420,000	\$158,585
Winter Part-Peak	0.05624	2,580,000	\$145,099
Winter Off-Peak	0.04719	3,420,000	\$161,390
Total			\$872,834

Power Exchange Price This Month:	Peak	=	2.9¢/kWh
	Partial-Peak	=	2.7¢/kWh
	Off-Peak	=	2.1¢/kWh