Rochester Public Utilities
Board Study Session

October 30, 2018

VISION: We will set the standard for service.

CORE VALUES: Safety • Integrity • Service • Stewardship • Accountability • Skill

Rate Structure	Pro's	Con's
Flat Rate w/ Low Monthly Customer Charge Does not require AMI	• Simple and easy for customers to understand • Lowers cost to low energy users • Encourages reductions in energy usage • Encourages distributed generation - Solar/Wind	• Not Cost Based, Increases cross customer subsidies for distributed generation - Solar/Wind • Under charges customers with low load factors • Over charges customer with higher load factors • Increases cost to high energy users • Disincents efficient electrification - EV's, Heat • Increases rate volatility in response to less consumption
Inclining Block - Energy Rates Does not require AMI	• Rates increase with increased usage • Encourages distributed generation - Solar/Wind • Lowers cost to low energy users • Encourages reductions in energy usage	• Not Cost Based, Increases cross customer subsidies for distributed generation - Solar/Wind • Will increase cost shifts within customer class • Increases rate volatility as reductions come from the highest block first • Increases cost to high energy users • Disincents efficient electrification - EV's, Heat
Inclining Block Customer Charge (Residential) Does not require AMI	• Customer charge includes traditional COS customer charges however the allocation of distribution, Transformer and Substation costs are allocated based on customer Kwh usage • Lowers cost to low energy users • Encourages reductions in energy usage	• Not Cost Based, Increases cross customer subsidies within the residential customer class • Normally based on maximum usage (Ratchet) over the past 12 months. May lead to customer questions or confusion. Going to a monthly basis creates greater bill variation. • Does not incent increase electrification - EV's, Heat

Rate Structure	Pro's	Con's
Flat Rate w/ COS Customer charges Does not require AMI	• Simple and easy for customers to understand • Industry Norm/trend is to move toward cost-based customer charges • More accurately recovers cost of fixed infrastructure required for customer to receive service irrespective of usage • Reduces cross subsidization • Recovers cost from seasonal customers • Reduces subsidy provided by year round ratepayers	• Some cross customer subsidies within customer classes • Under charges customers with low load factors • Over charges customer with higher load factors
Time of Use Rates May require AMI	• Cost Based, Sends better price signals to customers • Promotes customer behavior that aligns with utility costs (Savings) and over time reduce system costs • Provides customers with options to reduce bill by modifying behavior. Eg EV charging off peak • Greater equity between the price of electricity and the actual cost of delivering service • Excess generation from DG customers credited at rate closer to actual value	• May increase or decrease the value of solar • Creates additional complexity and education of customers. • Requires AMI if more than two time periods • May harm customers that cannot shift energy usage
Demand Charges Requires AMI	• Cost Based, More accurately recovers cost from customer based on impact (Demand) on distribution and transmission system • Promotes customer behavior that aligns with utility costs (Savings) and over time reduce system costs • May promote efficient Electrification – EV's, Heat • May promote the installation of Batteries for solar customers • May promote energy efficiency programs that reduce use and demand • Utilities are moving toward demand charges for all classes of customers	• Creates additional complexity and education of customers. Understanding "ratchet" • May disincent conservation once ratchet has been set • Need AMI capital cost & operational investment • May harm customers that can not shift energy usage • May not benefit low use customers with high demand • Increases fixed rates (customer charge + ratchet)

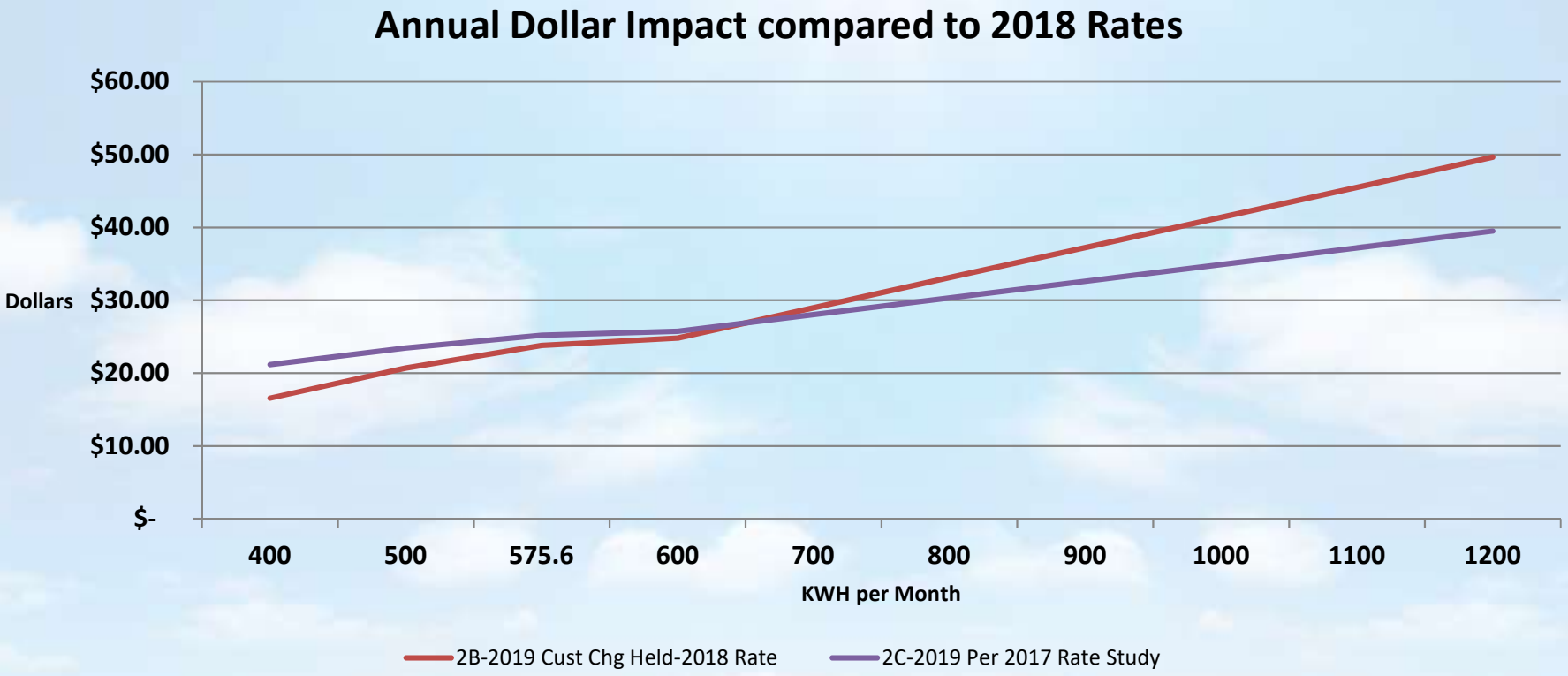
Residential Customer Charge Breakdown (per 2017 Cost of Service Study)

Customer Charge Components		Residential	Costs
Distribution Customer Costs	$	7.68	Minimum Sizing on wires
Transformer Customer Costs	$	2.29	Transformer costs minimum
Substation Customer Costs	$	0.34	Substation minimum
Meter O&M	$	2.02	Meter Costs
Meter Reading	$	0.46	Cost to read meter
Billing	$	4.43	Cost to bill customer
Services	$	0.84	Cost of service drop to customer
Customer Service	$	3.53	Customer service department costs
Customer Charge	**$**	**21.60**	

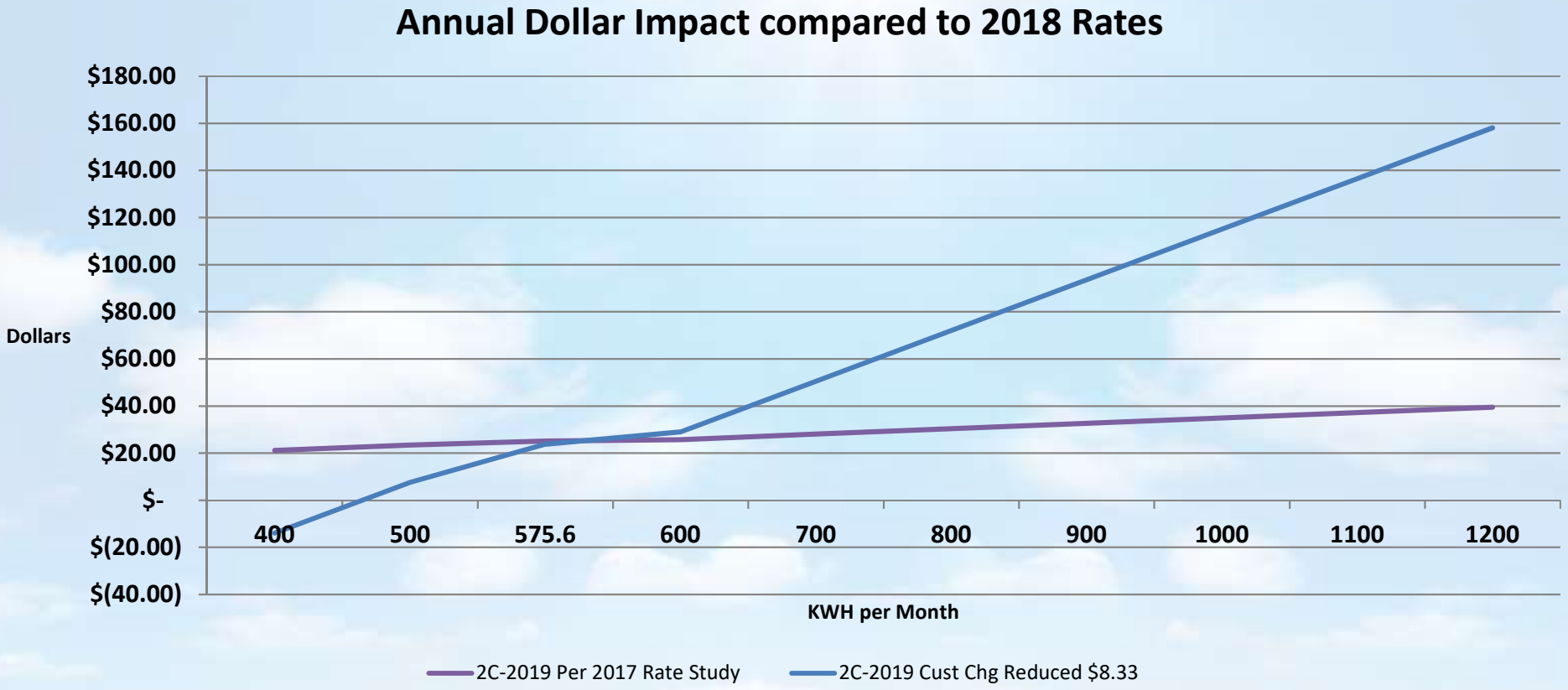
Note: 2018 Residential Customer Charge - $19.50/Mo

39% of Fixed Distribution Cost are in Energy Charge
61% included in customer Charge at $21.60/Mo

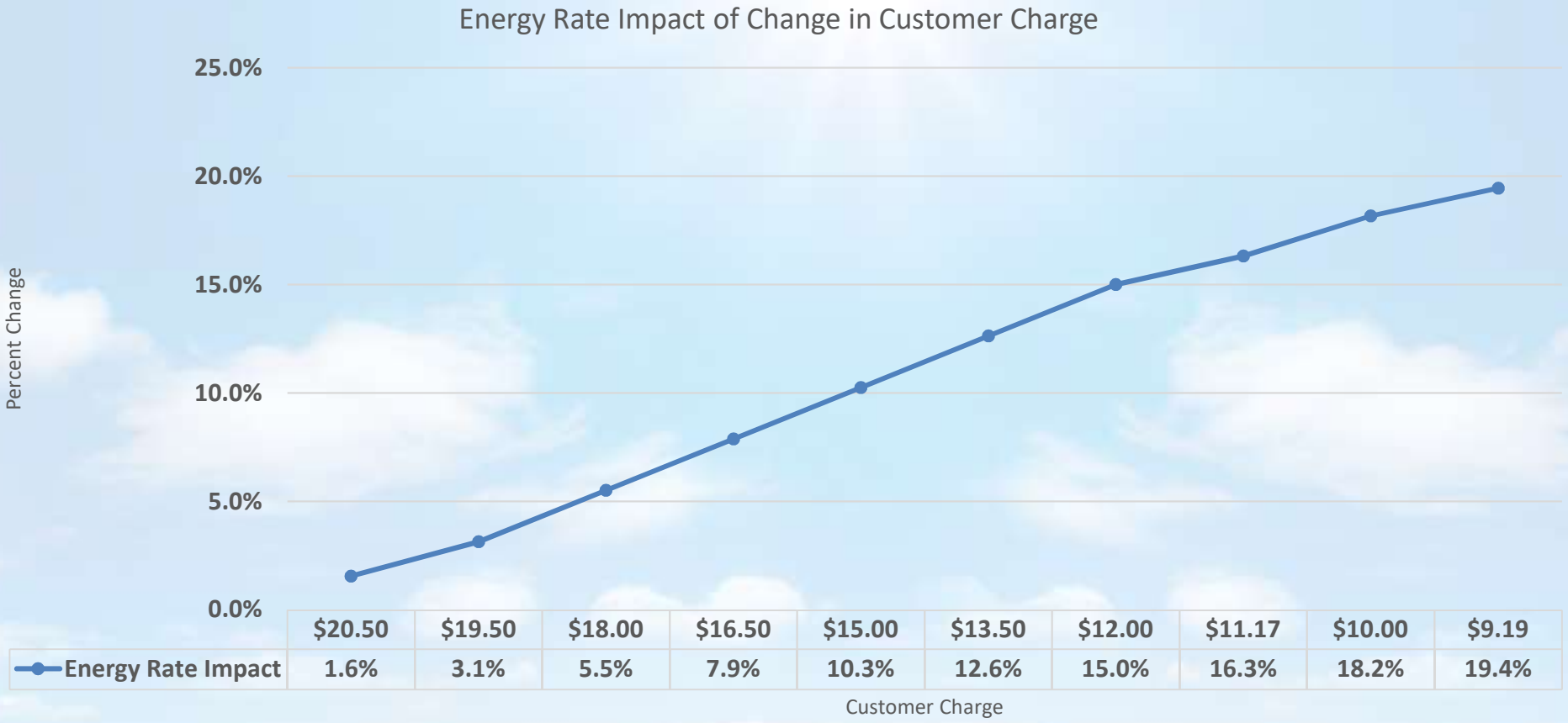
Residential Rate Structure Impact



Residential Rate Structure Impact



Residential Rate Structure



	$20.50	$19.50	$18.00	$16.50	$15.00	$13.50	$12.00	$11.17	$10.00	$9.19
Energy Rate Impact	1.6%	3.1%	5.5%	7.9%	10.3%	12.6%	15.0%	16.3%	18.2%	19.4%