

INDEX OF COMMISSION QUESTIONS AND RESPONSES WITH REFERENCE TO SUPPORTING WITNESS
SAN DIEGO GAS AND ELECTRIC COMPANY
IN SUPPORT OF FEBRUARY 28, 2014 SUPPLEMENTAL FILING
RULEMAKING 12-06-013 PHASE 1

Rate Design Questions

Overall Rate Design Structure

1) (SPONSORED BY CYNTHIA FANG) Please describe, in summary form, the proposed default residential rate structure for each year 2015 – 2018, including your proposed rates under two scenarios: (a) no additional revenue requirement change and (b) revenue requirements adjusted by 2.1% per year. Include a Rate Design Roadmap that provides a detailed year-by-year narrative, and a summary table that shows the major rate design structure, policy, and elements year-by-year including the proposed rates. Include any optional rates that you are proposing in this proceeding as well as other optional rates in effect or being determined in other proceedings.

SDG&E proposes:

Tiered Rate Structure

- Implementation of a 2-tiered rate structure for rates effective January 1, 2015 and glide-path to 20% differential between the lowest and highest tier by 2018, specifically through the following phase-in schedule:
 - 2016: 40% differential between highest and lowest tier
 - 2017: 30% differential between highest and lowest tier
 - 2018: 20% differential between highest and lowest tier
 - Revenue requirement allocated as necessary to reach target differentials.
 - Reflect seasonal differentiation of commodity rates in both lower and upper tiered rates.
- Implementation of a residential monthly service fee (“MSF”) beginning 2015 and transitioning through 2018 and beyond for separately metered customers as follows:
 - 2015: \$5/month non-CARE and \$2.50/month CARE
 - 2016: \$7.50/month non-CARE and \$3.75/month CARE
 - 2017: \$10/month non-CARE and \$5/month CARE
 - 2018: begin annual CPI increase.
- Resulting in a 2018 opt-out 2-tiered rate option presented as a flat rate with a baseline credit.

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Table below reflects SDG&E’s proposal for rates beginning January 1, 2015 and the roadmap for rates through 2018 under no revenue change.

No revenue change is revenue neutral to rates that will be effective with the implementation of SDG&E’s 2012 GRC P2 (AL-2575).

No Revenue Changes	GRC P2 (Based on Feb 2014)	2015	% Change	2016	% Change	2017	% Change	2018	% Change
Residential Revenue (\$)	1,462,415,758	1,462,415,775	0.0%	1,462,415,775	0.0%	1,462,415,775	0.0%	1,462,415,775	0.0%
System Revenue (\$)	3,407,523,538	3,407,506,236	0.0%	3,407,506,236	0.0%	3,407,506,236	0.0%	3,407,506,236	0.0%
Residential Average Rate (¢/kWh)	19.7	19.7	0.0%	19.7	0.0%	19.7	0.0%	19.7	0.0%
System Average Rate (¢/kWh)	18.2	18.2	0.0%	18.2	0.0%	18.2	0.0%	18.2	0.0%

- SDG&E’s Phase 1 Proposal presented is revenue neutral with February 1, 2014 effective rates adjusted for the implementation of SDG&E’s 2012 GRC P2 (AL-2575) and reflects 2015 RDW Test Year Determinants and current baseline allowances.

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No Revenue Changes	GRC P2 (Based on Feb 2014)	2015	% Change	2016	% Change	2017	% Change	2018	% Change
Non-CARE									
Monthly Service Fee (\$/Mo)	0.00	5.00	N/A	7.50	50.0%	10.00	33.3%	10.21	2.1%
Summer Energy (¢/kWh)									
Tier 1: Baseline	15.4	17.8	15.5%	18.2	2.4%	18.4	0.9%	19.0	3.2%
Tier 2: 101% to 130% of Baseline	17.8	17.8	0.0%	18.2	2.4%	18.4	0.9%	19.0	3.2%
Tier 3: 131% to 200% of Baseline	33.3	27.6	-17.3%	25.5	-7.5%	23.9	-6.3%	22.8	-4.7%
Tier 4: Above 200% of Baseline	35.3	27.6	-22.0%	25.5	-7.5%	23.9	-6.3%	22.8	-4.7%
<i>High Tier / Low Tier Ratio</i>	2.29	1.55		1.40		1.30		1.20	
Winter Energy (¢/kWh)									
Tier 1: Baseline	15.4	15.3	-0.4%	15.5	1.1%	15.5	-0.2%	15.8	2.2%
Tier 2: 101% to 130% of Baseline	17.8	15.3	-13.7%	15.5	1.1%	15.5	-0.2%	15.8	2.2%
Tier 3: 131% to 200% of Baseline	29.4	23.8	-19.0%	21.7	-8.7%	20.1	-7.4%	19.0	-5.6%
Tier 4: Above 200% of Baseline	31.4	23.8	-24.2%	21.7	-8.7%	20.1	-7.4%	19.0	-5.6%
Minimum Bill (\$/Mo)	0.17	0	-100.0%	0	N/A	0	N/A	0	N/A
<i>High Tier / Low Tier Ratio</i>	2.04	1.55		1.40		1.30		1.20	

- SDG&E's Phase 1 Proposal presented is revenue neutral with February 1, 2014 effective rates adjusted for the implementation of SDG&E's 2012 GRC P2 (AL-2575) and reflects 2015 RDW Test Year Determinants and current baseline allowances.
*2018 would include CPI adjustment.

No Revenue Changes	GRC P2 (Based on Feb 2014)	2015	% Change	2016	% Change	2017	% Change	2018	% Change
CARE (After Discount and Exemption)									
Monthly Service Fee (\$/Mo)	0.00	2.50	N/A	3.75	50.0%	5.00	33.3%	5.11	2.2%
Summer Energy (¢/kWh)									
Tier 1: Baseline	10.1	11.0	9.9%	11.8	7.1%	12.5	5.5%	12.9	3.6%
Tier 2: 101% to 130% of Baseline	11.8	11.0	-6.1%	11.8	7.1%	12.5	5.5%	12.9	3.6%
Tier 3: 131% to 200% of Baseline	17.3	17.6	1.4%	16.9	-3.8%	16.5	-2.5%	15.7	-4.9%
Tier 4: Above 200% of Baseline	17.3	17.6	1.4%	16.9	-3.8%	16.5	-2.5%	15.7	-4.9%
<i>High Tier / Low Tier Ratio</i>	1.73	1.59		1.43		1.32		1.21	
Winter Energy (¢/kWh)									
Tier 1: Baseline	10.1	9.4	-6.3%	9.9	5.6%	10.4	4.1%	10.6	2.6%
Tier 2: 101% to 130% of Baseline	11.8	9.4	-19.9%	9.9	5.6%	10.4	4.1%	10.6	2.6%
Tier 3: 131% to 200% of Baseline	16.2	15.1	-7.1%	14.3	-5.2%	13.7	-3.8%	12.9	-5.9%
Tier 4: Above 200% of Baseline	16.2	15.1	-7.1%	14.3	-5.2%	13.7	-3.8%	12.9	-5.9%
Minimum Bill (\$/Mo)	0.14	0.00	-100.0%	0.00	N/A	0.00	N/A	0.00	N/A
<i>High Tier / Low Tier Ratio</i>	1.61	1.60		1.44		1.33		1.22	
Total Effective Discount	39%	38%	-3.2%	36%	-5.4%	34%	-5.5%	34%	-0.1%
Line Item Discount (excludes MSF)	20%	33%	65.5%	30%	-8.9%	27%	-10.2%	27%	-0.4%

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*2018 would include CPI adjustment.

Table below reflects SDG&E’s proposal for rates beginning January 1, 2015 and the roadmap for rates through 2018 with revenue change.

Revenue change scenario assumes 100% of estimated revenue increases described in the testimony and assumption of 2.1% annual CPI increase to system revenues to rates that will be effective with the Implementation of SDG&E’s 2012 GRC P2 Implementation (AL-2575).

100% Revenues + CPI	GRC P2 (Based on Feb 2014)	2015	% Change	2016	% Change	2017	% Change	2018	% Change
Residential Revenue (\$)	1,462,415,758	1,754,468,934	20.0%	1,793,865,363	2.2%	1,834,089,116	2.2%	1,875,157,569	2.2%
System Revenue (\$)	3,407,523,538	4,041,499,131	18.6%	4,125,430,626	2.1%	4,211,124,682	2.1%	4,298,618,312	2.1%
Residential Average Rate (¢/kWh)	19.7	23.6	20.1%	24.2	2.2%	24.7	2.2%	25.2	2.2%
System Average Rate (¢/kWh)	18.2	22.0	20.9%	22.4	2.1%	22.9	2.1%	23.4	2.1%

- SDG&E’s Phase 1 Proposal presented is revenue neutral with February 1, 2014 effective rates adjusted for the implementation of SDG&E’s 2012 GRC P2 (AL-2575) and reflects 2015 RDW Test Year Determinants and current baseline allowances with revenue changes reflecting the additional impact of (1) 2014 ERRRA Forecast and (2) assumption of year-end ERRRA Trigger balance of \$213.3 million and additional 2014 anticipated balance of \$80 million, and (3) CPI assumption of 2.1% increase to System Revenues each year, applied to equally to Distribution and Commodity.

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100% Revenues + CPI	GRC P2 (Based on Feb 2014)	2015	% Change	2016	% Change	2017	% Change	2018	% Change
Non-CARE									
Monthly Service Fee (\$/Mo)	0.00	5.00	N/A	7.50	50.0%	10.00	33.3%	10.21	2.1%
Summer Energy (¢/kWh)									
Tier 1: Baseline	15.4	21.8	41.5%	22.9	5.0%	23.7	3.8%	25.1	5.7%
Tier 2: 101% to 130% of Baseline	17.8	21.8	22.5%	22.9	5.0%	23.7	3.8%	25.1	5.7%
Tier 3: 131% to 200% of Baseline	33.3	33.6	0.8%	32.0	-4.7%	30.9	-3.6%	30.1	-2.4%
Tier 4: Above 200% of Baseline	35.3	33.6	-4.9%	32.0	-4.7%	30.9	-3.6%	30.1	-2.4%
<i>High Tier / Low Tier Ratio</i>	2.29	1.54		1.40		1.30		1.20	
Winter Energy (¢/kWh)									
Tier 1: Baseline	15.4	18.2	18.1%	18.8	3.5%	19.3	2.5%	20.2	4.5%
Tier 2: 101% to 130% of Baseline	17.8	18.2	2.3%	18.8	3.5%	19.3	2.5%	20.2	4.5%
Tier 3: 131% to 200% of Baseline	29.4	28.0	-4.5%	26.3	-6.1%	25.1	-4.8%	24.2	-3.5%
Tier 4: Above 200% of Baseline	31.4	28.0	-10.6%	26.3	-6.1%	25.1	-4.8%	24.2	-3.5%
Minimum Bill (\$/Mo)	0.17	0	-100.0%	0	N/A	0	N/A	0	N/A
<i>High Tier / Low Tier Ratio</i>	2.04	1.54		1.40		1.30		1.20	

- SDG&E's Phase 1 Proposal presented is revenue neutral with February 1, 2014 effective rates adjusted for the implementation of SDG&E's 2012 GRC P2 (AL-2575) and reflects 2015 RDW Test Year Determinants and current baseline allowances with revenue changes reflecting the additional impact of (1) 2014 ERRR Forecast and (2) assumption of year-end ERRR Trigger balance of \$213.3 million and additional 2014 anticipated balance of \$80 million, and (3) CPI assumption of 2.1% increase to System Revenues each year, applied to equally to Distribution and Commodity.

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100% Revenues + CPI	GRC P2 (Based on Feb 2014)	2015	% Change	2016	% Change	2017	% Change	2018	% Change
CARE (After Discount and Exemption)									
Monthly Service Fee (\$/Mo)	0.00	2.50	N/A	3.75	50.0%	5.00	33.3%	5.11	2.2%
Summer Energy (¢/kWh)									
Tier 1: Baseline	10.1	13.5	34.3%	14.8	9.6%	16.0	8.3%	17.0	6.1%
Tier 2: 101% to 130% of Baseline	11.8	13.5	14.7%	14.8	9.6%	16.0	8.3%	17.0	6.1%
Tier 3: 131% to 200% of Baseline	17.3	21.3	22.6%	21.1	-1.0%	21.1	0.2%	20.6	-2.5%
Tier 4: Above 200% of Baseline	17.3	21.3	22.6%	21.1	-1.0%	21.1	0.2%	20.6	-2.5%
<i>High Tier / Low Tier Ratio</i>	1.73	1.58		1.42		1.32		1.21	
Winter Energy (¢/kWh)									
Tier 1: Baseline	10.1	11.1	10.7%	12.0	8.0%	12.8	6.8%	13.5	4.9%
Tier 2: 101% to 130% of Baseline	11.8	11.1	-5.4%	12.0	8.0%	12.8	6.8%	13.5	4.9%
Tier 3: 131% to 200% of Baseline	16.2	17.6	8.7%	17.2	-2.5%	17.0	-1.2%	16.3	-3.6%
Tier 4: Above 200% of Baseline	16.2	17.6	8.7%	17.2	-2.5%	17.0	-1.2%	16.3	-3.6%
Minimum Bill (\$/Mo)	0.14	0.00	-100.0%	0.00	N/A	0.00	N/A	0.00	N/A
<i>High Tier / Low Tier Ratio</i>	1.61	1.58		1.43		1.32		1.21	
Total Effective Discount									
	39%	38%	-3.3%	36%	-5.3%	34%	-5.5%	34%	-0.1%
Line Item Discount (excludes MSF)									
	20%	34%	71.0%	32%	-7.9%	29%	-8.8%	29%	-0.1%

- SDG&E's Phase 1 Proposal presented is revenue neutral with February 1, 2014 effective rates adjusted for the implementation of SDG&E's 2012 GRC P2 (AL-2575) and reflects 2015 RDW Test Year Determinants and current baseline allowances with revenue changes reflecting the additional impact of (1) 2014 ERRA Forecast and (2) assumption of year-end ERRA Trigger balance of \$213.3 million and additional 2014 anticipated balance of \$80 million, and (3) CPI assumption of 2.1% increase to System Revenues each year, applied to equally to Distribution and Commodity.

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TOU Rate Structure

- Default TOU with MSF to be implemented 2018:

TOU with MSF	Units	Proposed 2018
Monthly Service Fee	\$/Month	\$10.21
Summer Energy		
On-Peak	\$/kWh	0.27279
Semi-Peak	\$/kWh	0.22758
Off-Peak	\$/kWh	0.19682
Winter Energy		
On-Peak	\$/kWh	0.21351
Semi-Peak	\$/kWh	0.20196
Off-Peak	\$/kWh	0.18594
130% Baseline Credit Summer	\$/kWh	(0.03793)
130% Baseline Credit Winter	\$/kWh	(0.03163)

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- Optional cost-based TOU rates including a demand differentiated monthly service fee (“DDMSF”), i.e. a MSF that varies depending on customer size:
 - TOU rate for the recovery of commodity costs;
 - Demand differentiated monthly service fee (“DDMSF”) for the recovery of distribution customer and demand costs; and
 - No tiers.

Max kW range	Customer Costs (\$/month)	Distribution Demand Costs (\$/month)	Proposed Monthly Service Fee (\$/month)
Up to 3kW	\$14.52	\$13.26	\$27.78
3 kW up to 6 kW	\$14.52	\$33.89	\$48.42
6 kW and above	\$14.52	\$65.00	\$79.53

TOU Period	Units	Commodity Rate	Residual UDC Rate + DWR-BC	Total Energy Rate
On-Peak: Summer	\$/kWh	0.15061	0.04570	0.19631
Semi-Peak: Summer	\$/kWh	0.10540	0.04570	0.15110
Off-Peak: Summer	\$/kWh	0.07464	0.04570	0.12034
On-Peak: Winter	\$/kWh	0.07874	0.04570	0.12444
Semi-Peak: Winter	\$/kWh	0.06719	0.04570	0.11289
Off-Peak: Winter	\$/kWh	0.05117	0.04570	0.09687

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Other Items

- To increase the minimum bill charge for master-metered customers beginning 2015 from \$0.17/day to \$0.30/day for non-CARE and no change to the existing \$0.17/day minimum bill charge for CARE master metered customers and implement an annual CPI adjustment beginning 2016 for both the non-CARE and CARE minimum bill charge.
- Adoption of a transition path for the effective CARE discount designed to comply with the legislative requirement that the effective CARE discount be in the range of 30% to 35% for both residential and non-residential CARE customers, specifically:
 - Residential: 2015 – 38%; 2016 – 36%; 2017 – 34%;
 - Small Commercial : 3% annual reduction beginning 2015 to reach 35% by 2018; and
 - Medium and Large Commercial and Industrial (“M/L C&I”): 4% annual reduction beginning 2015 to reach 35% by 2018;
- Adoption of a transition path for non-CARE medical baseline rates designed to ensure that non-CARE medical baseline customers pay the same non-CARE rates as those that are applicable to all other non-CARE customers (less the Department of Water Resources Bond Charge (“DWR-BC”) exemption) by 2018.

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	Current			2015			2016			2017			2018		
	Distribution	Commodity	Tiers	Distribution	Commodity	Tiers	Distribution	Commodity	Tiers	Distribution	Commodity	Tiers	Distribution	Commodity	Tiers
	Standard Rate			Standard Rate			Standard Rate			Standard Rate			Opt-Out Rate		
Tier Option	flat volumetric rate	flat seasonal volumetric rate	4-tiered volumetric rate	\$5 Non-CARE \$2.50 CARE MSF with residual recovered in volumetric rate	flat seasonal volumetric rate	2-tiered volumetric rate	\$7.50 Non-CARE \$3.75 CARE MSF with residual recovered in volumetric rate	flat seasonal volumetric rate	2-tiered volumetric rate with 40% differential	\$10 Non-CARE \$5 CARE MSF with residual recovered in volumetric rate	flat seasonal volumetric rate	2-tiered volumetric rate with 30% differential	\$10+CPI Non-CARE/\$5+CPI CARE MSF with residual recovered in volumetric rate	flat seasonal volumetric rate	2-tiered volumetric rate with 20% differential; presented as flat rate with bill credit applicable to 130% baseline usage
Non-CARE															
Tier 1															
Tier 2															
Tier 3															
Tier 4															
				New Option			Optional			Optional			Optional		
TOU Option				DDMSF for recovery of distribution costs	TOU volumetric rate differentiated by season	N/A	DDMSF for recovery of distribution costs	TOU volumetric rate differentiated by season	N/A	DDMSF for recovery of distribution costs	TOU volumetric rate differentiated by season	N/A	DDMSF for recovery of distribution costs	TOU volumetric rate differentiated by season	N/A
On Peak															
Off Peak															
Super Off Peak															
													Default		
TOU Option													\$10+CPI Non-CARE \$5+CPI CARE MSF with residual recovered in volumetric rate	TOU volumetric rate differentiated by season	bill credit applicable to 130% baseline usage
On Peak															
Off Peak															
Super Off Peak															

*Does not include rates with limited applicability. Detailed inventory of residential rate schedules included in Attachment H.

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2) (SPONSORED BY CHRIS YUNKER) Briefly describe how your rate design proposal conforms to each of the 10 rate design principles in R.12-06-013.

As is discussed below, SDG&E's proposals are designed to conform with the Rate Design Principles the Commission updated and outlined in Phase 1 of R.12-06-013:

1. *Low-income and medical baseline customers should have access to enough electricity to ensure basic needs (such as health and comfort) are met at an affordable cost;*

SDG&E's proposal is consistent with the legislated levels for CARE discounts pursuant to AB 327. SDG&E transitions to the statutory discount for CARE of 30% to 35% by applying the discount to all sales equally and then backing down the percentage of the discount directly over time.

2. *Rates should be based on marginal cost;*

SDG&E allocates costs between customers based on marginal cost studies in order to appropriately allocate costs to classes of customers based on how the class contributes to marginal energy, capacity and grid infrastructure requirements.

SDG&E introduces optional and experimental TOU rates in 2015 to provide a rate option to customers which aligns periods of high and low costs with the rate that customers see.

In 2018, SDG&E proposes to default customers to TOU rates so that a greater percentage of our customers will be on rates that align the price signals they see with the costs the utility incurs.

3. *Rates should be based on cost-causation principles*

Beginning in 2015, SDG&E proposes to charge customers a fixed monthly service fee, also known as a fixed charge. The fixed charge will ultimately be set at a level consistent with AB 327. This will allow SDG&E to recover a portion of fixed costs that do not vary with consumption in the manner in

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which these costs are incurred. SDG&E has an obligation to serve all of its customers in its service territory and must build and maintain adequate facilities to serve the needs of its customers. While it will not provide for recovery of distribution demand costs, the fixed charge will help to pay for a portion of the costs that are necessary to serve each individual customer.

TOU rates have higher rates for periods in which increased customer demand results in higher costs and lower rates for periods where costs to serve customers are low. Therefore, if customers are using more electricity at times during high levels of demand or when the system is constrained (e.g., peak times), they will pay a price that more accurately reflects the cost of electricity during that period of use.

The optional TOU rates that SDG&E will propose beginning in 2015 will include monthly service fees that are different based on the amount of capacity a customer requires to serve its electrical needs. This approach is also known as “demand differentiated.” These demand differentiated monthly service fees will supplement the recovery of fixed customer costs through fixed charges with a mechanism designed to recover distribution costs based on the size of the customer. SDG&E designs distribution system to meet all customers’ non-coincident demands, or all customers’ individual peak demands. Charging a customer for the cost of the grid based on their individual peak demands will better align SDG&E’s recovery of distribution infrastructure costs with how it incurs those costs.

4. Rates should encourage conservation and energy efficiency;

By moving customers to default TOU rates in 2018, SDG&E will create the opportunity for customers to better understand that their energy usage has a different cost at different times in the day. Currently, the conservation signal is sent to customers purely from a total bill standpoint. But, by sending customers the signal that certain times of the day are more expensive, customers will realize opportunities to save money by changing their behavior and conserving at times when electricity is more expensive. This will encourage a higher percentage of customers to participate in energy efficiency as

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well because rebates can be sized to provide an economic incentive that ties to all sales based on high cost periods where conservation and energy efficiency provide the greatest benefit. Today only 30% of residential sales receive any conservation signal that upper tiers may provide. By providing an incentive or rebate to an un-tiered rate, all customers will have more meaningful opportunities to participate in energy efficiency regardless of whether they are high or low users of energy.

5. Rates should encourage reduction of both coincident and non-coincident peak demand;

TOU rates send a price signal that encourages customers to reduce their coincident peak demand while the existing tiered structure does not because the prices charged to customers only vary depending on which tier they are in and that price does not reflect the difference in the cost of electricity service when the system is at peak. TOU periods are designed to recover a greater percentage of capacity costs during on-peak periods resulting in a higher on-peak price period.

SDG&E is also proposing optional TOU rates to be offered starting in 2015. These rates will include demand differentiated monthly service charges. The fixed charges that are differentiated by a customer's demand addresses the issue of non-coincident peak demand because differentiating fixed charges by customer size sends a price signal that will encourage customers to reduce their individual peak demand. Again, the current tiered rate structure does not accomplish this goal.

6. Rates should provide stability, simplicity and customer choice;

Currently, the four tier system is not working as intended. For SDG&E, the difference between summer Tier 2 and Tier 3 is over \$0.17 (Tier 2 is \$0.178 and Tier 3 is \$0.349). This gap continues to grow. Should a customer move from Tier 2 to Tier 3 in a given month, this will have drastically different impacts on their bill. This jump from one tier to the next and the associated price difference is neither stable nor simple. By providing prices that accurately reflect the cost to serve a customer,

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massive jumps in prices will be minimized or eliminated. Customers will begin to become comfortable that electricity is more expensive during peak times and less expensive during non-peak times – the same way customers know flights are more expensive during the holidays. This, in turn, increases stability. Steeply inclining tier blocks result in prices spiking for a minority of customers that can result from loading a minority of sales with a disproportionate level of cost increases.

SDG&E's TOU proposals reduce the tier differentials, or in the case of the optional TOU rate, eliminate them.

In 2018, both the default TOU rate and the optional tiered rate will include the same tiering mechanism in the form of a baseline credit. This is a \$/kWh credit provided for usage up to baseline levels. By providing the same credit for both the default TOU and optional flat rate, customers will have a simpler choice.

7. Rates should avoid cross-subsidies, unless the cross-subsidies appropriately support explicit state policy goals;

SDG&E includes default TOU rates in 2018 and optional TOU rates starting in 2015 which include demand differentiated monthly service fees. These TOU rates are more accurate than the existing tier structure. Greater accuracy in pricing reduces cross subsidies as they more accurately recover a customers' cost of service. Additionally, the fixed charges that are being proposed will apply to all customers to cover a portion of the customers fixed costs. When customers' energy use is low, their contribution to those costs that are fixed is lowered and other customers pick up these costs. The fixed charge will help reduce this cross-subsidy.

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8. Rates should encourage economically efficient decision-making;

First and foremost, accurate prices are required for customers to make economically efficient decisions. If a customer is paying less than the cost to serve overall or is being charged less than what it costs to serve that customer at a specific time of day, that customer will not make the most economically efficient decision. The converse is also true. SDG&E's proposals, whether it is the optional TOU or default TOU rate structures, by their nature are a more accurate pricing regime than the current system. As a result, customers will be more equipped with the information they need to make more economically sound decisions.

Additionally, today's rates are "all-in" rates. That is, the rate a customer is charged covers both the fixed and variable components of their bills. By implementing a fixed charge, the customer is better able to understand what the true cost of the variable component is. The variable component of a customer's bill is that portion they have the most control over because it directly correlates to their usage.

9. Incentives should be explicit and transparent; and

SDG&E proposes that subsidies be offered transparently through bill credits that minimize the distortion in the rate for energy and grid services. Offering line item discounts for CARE, Medical Baseline and tiering through a baseline credit will allow customers to more transparently see their cost of service.

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10. Transitions to the new rate structure should emphasize customer education and outreach that enhances customer understanding and acceptance of new rates, and minimizes and avoids the potential for rate shock.¹

SDG&E's transition takes into account SDG&E's current rate structure as well as SDG&E's 2018 rate structure. Customer outreach and education will be addressed in the March 21, 2014 filing. In terms of minimizing and avoiding rate shock, SDG&E's transition to default TOU rates includes the introduction of optional TOU rates in 2015 and experimental TOU rates to assess alternative structures that can lead to additional options for customers which can ease customer acceptance.

In the transition to the opt out structure, SDG&E will leverage what is essentially a two tier structure, consolidate the lower tiers and upper tiers (which are roughly 2 cents apart) and then bring the two tiers closer together from the current spread of roughly 16 cents. In 2018 the tiered rate would become optional and the structure would be transitioned to a flat rate with a baseline credit of 20%.

¹ Administrative Law Judge's Ruling Requesting Residential Rate Design Proposals, issued on March 19, 2013, Attachment A Principles of Rate Design.

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3) (SPONSORED BY CYNTHIA FANG) Describe how your rate design proposal complies legally and substantively with the relevant provisions of D.08-07-045, particularly ordering paragraph 8.

Ordering Paragraph (“OP”) 8 requires PG&E to file an application proposing a default time-variant rate for residential customers 90 days after the Commission approves a decision that interprets a change in the AB 1X rate protections in a manner that could allow for a default or mandatory time-variant rates for residential customers. The effective date for this default time-variant rate should be no later than one year after the filing date of the application unless PG&E can justify a later effective date as being necessary to allow for customer education and system upgrades.

AB 327 added Section 745 to the Public Utilities Code that allows the Commission to implement default time-variant pricing for residential customers beginning January 1, 2018. Section 745 of the Public Utilities Code provides, in pertinent part, as follows:

“(b) . . . The commission shall not establish a mandatory or default time-variant pricing tariff for any residential customer except as authorized in subdivision (c).

(c) Beginning January 1, 2018, the commission may require or authorize an electrical corporation to employ default time-of-use pricing for residential customers...”

Pursuant to AB 327 and in compliance with the February 13, 2014 ACR in this proceeding, SDG&E’s residential rate roadmap includes a proposed default TOU rate for residential customers beginning January 1, 2018, as addressed in the prepared direct testimony of SDG&E witness Chris Yunker (Chapter 1). SDG&E will file the details of this default TOU rate in a future application. In this proceeding, SDG&E is proposing optional and experimental TOU rates starting January 1, 2015 to help inform and educate customers about the default TOU structure that will be implemented on January 1, 2018.

In addition, SDG&E will be implementing optional TOU and Critical Peak Pricing (“CPP”) rates for residential customers in 2014, pursuant to D.12-12-004. In accordance with OP 5 of D.08-0745, SDG&E proposed optional CPP and TOU rates for residential customers in A.10-07-009 that were adopted in D.12-12-

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004. These optional CPP and TOU rates will be implemented on May 1, 2014 pursuant to pending SDG&E Advice Letter 2577-E filed on February 18, 2014. These rates, similar to the additional optional and TOU rates proposed in this proceeding, will help educate customers about TOU structures prior to the default TOU rate being implemented for residential customers in 2018.

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4) (SPONSORED BY CHRIS YUNKER) Does your default rate design request for 2018 and beyond include two, three, or four tiered rates?

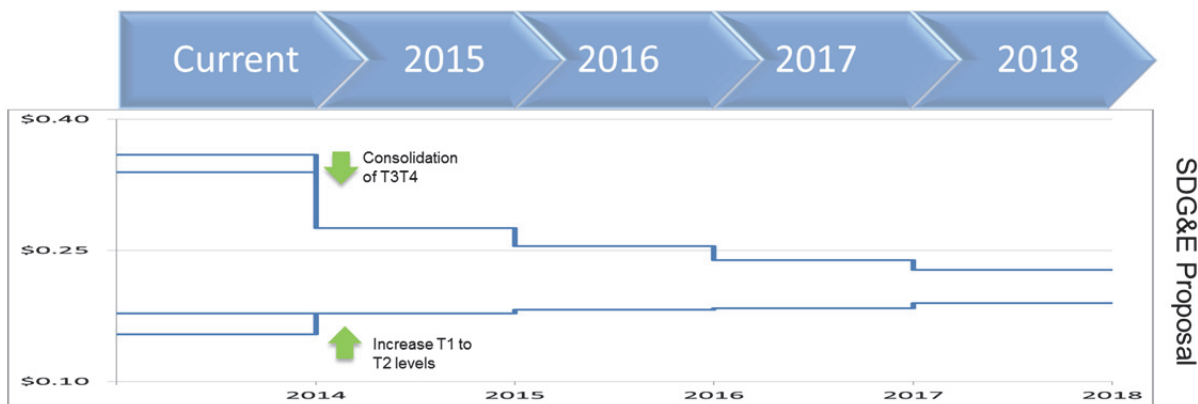
SDG&E’s default rate in 2018 is a TOU rate with a \$10 Monthly Service Fee (escalated at CPI) and a baseline credit. The baseline credit creates a two tier structure.

If so, how steeply tiered should these rates be?

SDG&E proposes to provide a baseline credit of 20% discount for the default TOU rate for up to the baseline level of energy use.

If you propose fewer than four tiers, how should the tiered rates transition over time to ensure a reasonable phase-in schedule?

SDG&E’s current structure, while having four tiers, is effectively a two tier system. SDG&E’s lower tiers are separated by 2.4 cents and the upper tiers are separated by 2 cents. The upper and lower tiers are separate by roughly 16 cents. By simply consolidating the upper and lower tiers and then moving the resulting upper and lower tiers closer together provides the smoothest path to a two tier system with a 20% differential in rates



Assumes current rate levels. Changes reflect change to rate structure only.

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If you propose retaining more than two tiers in 2018 and beyond, either as a default or an optional rate, please discuss the rationale for retaining three or more tiers.

SDG&E does not contemplate retaining more than two tiers

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5) (SPONSORED BY CHRIS YUNKER) *Does your rate design request propose default time-of-use (TOU) rates beginning January 1, 2018 or thereafter? Why or why not?*

SDG&E's roadmap includes default TOU rates beginning in January 1, 2018. There is significant evidence that TOU rates for residential customers can result in significant demand reductions which can help lower overall system costs as well as provide for conservation by avoiding building new infrastructure. As outlined in the testimony of Leslie Willoughby, studies and experience in Canada², Arizona (APS³ and Salt River Project⁴) and California (SMUD⁵) have shown that residential customers can successfully be transitioned to TOU rates with positive results both through optional rates as well as through default.

SDG&E includes in the supplemental filing a request to approve the move to default TOU periods in 2018 based on the merits of TOU pricing. SDG&E will then propose a specific TOU rate proposal including rate levels as part of the implementation in a following rate design proceeding.

² Impact Evaluation of Ontario's Time-of-Use Rates: First Year Analysis, Brattle Group, November 26, 2013, Executive Summary p. iv.

³ APS has approximately 50% of its residential customers enrolled in optional TOU rates.

⁴ Effects of Three-Hour On-Peak Time-of-Use Plan on Residential Demand during Hot Phoenix Summers, Loren Kirkeide, The Electricity Journal, May 2012, at p. 11.

⁵ SmartPricing Options Interim Evaluation, including SMUD Smart Pricing Option Pilot, Freeman, Sullivan & Co., Executive Summary, at pp. 1-11, and Chapter 5 Program Marketing, Customer Acceptance and Retention.

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6) (SPONSORED BY CHRIS YUNKER) *Regardless of whether you propose defaulting customers to a TOU rate, please explain why default TOU rates should or should not be tiered?*

Tiering of default TOU rates should be done through a single baseline line item adjustment. A line item adjustment provides for greater transparency in the price signal and customers' cost of service. By including a baseline credit as the tiering structure, SDG&E's proposal will allow for the same baseline credit to be offered for the optional tiered rate as well. This will simplify a customer's choice between the optional TOU rate and the tiered rate to one of simply a TOU rate or a flat rate, as both rates will have the same baseline credit.

While eliminating tiers would provide a more accurate price structure, SDG&E's proposal has been designed to avoid disagreements over baseline issues. As such, SDG&E includes it with the default rates. However, SDG&E also includes an optional un-tiered rate with a demand differentiated monthly service fee as an option for customers to have a more accurate price signal.

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7) *(SPONSORED BY CHRIS YUNKER) If you are proposing default TOU in 2018, what is your proposed opt-out rate or rates? For tiered rates, how many tiers are included and how steeply tiered are they?*

SDG&E's opt-out rate in 2018 is a two tiered rate with a 20% differential. The tiering would be accomplished by providing a line item baseline credit with on top of a flat rate.

SDG&E also plans to offer an optional TOU rate that is un-tiered with a cost based demand differentiated monthly serve fee which would be introduced starting in 2015. SDG&E is also considering offering a suite of TOU rates that could include shorter on-peak periods with higher on-peak to super off-peak differentials. The ultimate optional rates proposed will depend on the outcome of the experimental rate study that SDG&E proposes to begin in January 2015.

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8) (SPONSORED BY CHRIS YUNKER) *Prior to 2018, does your rate design request include optional TOU rates?*

SDG&E proposes to introduce an optional un-tiered TOU rate and experimental TOU rates in January 2015.

Please explain whether and why these optional TOU rates should be tiered or not.

SDG&E does not propose to tier the optional TOU rate. SDG&E seeks to introduce accurate price signals to customers to achieve the maximum benefits that TOU price signals can provide. Tiering distorts this price signal.

If your proposal includes optional TOU rates with fewer tiers than the default rate, do you expect some amount of revenue shortfall associated with higher cost upper tier customers migrating to the TOU rate?

Yes. SDG&E would anticipate that some high use customers would voluntarily migrate to TOU rates. An optional un-tiered TOU rate is aligned with the CPUC Rate Design Principles and promotes California's policy for a low carbon future. Rates that reflect accurate price signals would better reflect marginal cost (Rate Design Principle 2), better reflect cost causation principles (Rate Design Principle 3), create greater simplicity and stability and promote customer choice (Rate Design Principle 6), encourage economically efficient decision making (Rate Design Principle 8) and would create opportunities for all customers to participate meaningfully in energy efficiency, demand response and pursue low carbon technologies (Rate Design Principle 4).

How would you handle that revenue shortfall?

The revenue shortfall would be kept within the residential class and rolled back into residential rates on an equal cents per kWh basis.

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Should the optional TOU rates remain revenue neutral to the default rate during the 2015-2018 transitional period? Why or why not? What about after 2018?

Optional TOU rates should remain revenue neutral to the residential class during the 2015-2018 transitional period and beyond. SDG&E recognizes the issue that migration from the existing tiered rate structure to the un-tiered TOU structure could create. On one hand, eliminating tiers from optional TOU rates will arguably encourage customers to voluntarily opt in to TOU rates which can provide benefits by reducing on-peak demand avoiding the need for new infrastructure in the future. However, migration from the tiered structure to un-tiered structure can result in revenue shortfalls that need to be accounted for.

SDG&E balances these two competing issues through the transition roadmap. By reducing the differentials between tiers to 20% between 2015 and 2018 the revenue under-collection will be reduced over time. The default TOU rate in 2018 will have a baseline credit equal to the baseline credit on the optional flat rate (optional tiered rate required by AB 327). By setting the two credits equal migration between the default TOU rate and the optional tiered rate would not create any revenue under collection.

For the optional un-tiered rate in 2018, there could still be a revenue under-collection. However, customers who opt in to this rate would have one of the most accurately priced rates available to residential customers with fully allocated demand differentiated monthly service fees and TOU energy rates. Because the default TOU rate is subject to the statutory limitations on fixed charges, \$10 cap plus escalation, in AB 327 the default rate can only address fixed customer costs and falls short of addressing a customers' *"non-coincident demand"*, CPUC Rate Design Principle 5 *"Rates should encourage reduction of both coincident and non-coincident peak demand."* The optional tiered rate addresses neither coincident nor non-coincident demand. SDG&E believes both of the objectives should be met as reducing non-coincident demand recovers costs of the distribution system consistent with how these costs have been incurred, CPUC Rate Design Principle 3 (*"Rates should be based on cost-causation principles"*). Sending coincident and non-coincident demand signals encourages increased utilization of existing infrastructure which supports CPUC Rate Design Principle 4

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(“Rates should encourage conservation and energy efficiency”). More accurate price signals will also encourage conservation because accurate price signals empower customers to make economically efficient decisions, consistent with CPUC Rate Design Principle 8 (*“Rates should encourage economically efficient decision-making”*).

Customers who opt in to a more accurate pricing structure by choosing the optional TOU rate in 2018 will be more closely paying their cost of service and supporting the Commission’s Rate Design Principle. This, in turn, will support California’s policy for a low carbon future. Responding to the price signals from the optional TOU rate will contribute to lowering the costs that are allocated to the residential class.

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9) (SPONSORED BY CHRIS YUNKER) What other optional residential tariffs are you proposing either in this proceeding or in other proceedings? Do you propose additional optional time-variant pricing options that would take effect between 2015 and 2018? If yes, then describe these rates, e.g. critical peak pricing, electric vehicle rates, etc. Include specific details on: peak event period timing and pricing, event notification, and rate structure.

SDG&E believes that customers should have a variety of options that allow for greater accuracy and transparency in prices so that all the Commission's Rate Design Principle can be met. In this supplemental filing, SDG&E is proposing experimental TOU rates with two shorter 4-hour on-peak windows of 2 p.m. to 6 p.m. and 5 p.m. to 9 p.m. with a higher on-peak to super off-peak ratios to test customer response and adoption relative to the 2 p.m. to 9 p.m. seven-hour on-peak window with a lower on-peak to super off-peak ratio. SDG&E is proposing this now so that findings can be taken into consideration for additional optional TOU rates that could be offered in 2018. The details of the experimental rate are in the testimony of Leslie Willoughby.

SDG&E is actively engaging parties in the energy storage market to better understand the technical opportunities as well as the limitations, the various business models that are emerging within the industry, and the activities which may better support energy storage. SDG&E believes that rate reform is critical for customers to realize the full potential of energy storage and achieve a sustainable mass deployment of customer-side energy storage systems. Until this time, residential customers' only incentive is to install configurations with limited capabilities, focused solely on customer-side benefits.

SDG&E will also be filing a Vehicle to Grid Application that will promote the integration of electric vehicles into the grid including price signals that both encourage efficient utilization of the grid as well as encourage charging during periods expected to have excess intermittent renewable generation relative to load.

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10) (SPONSORED BY CHRIS YUNKER) How should the Commission ensure that any time-of-use rate schedule does not cause unreasonable hardship for senior citizens or economically vulnerable customers in hot climate zones?

SDG&E's proposals provide greater protection for customers in hot climate zones than the current tiered structure. While SDG&E's default TOU rate in 2018 includes the baseline credit the bigger protection is that SDG&E's proposals reduce the significant variable energy rate, in the form of the upper tier rate, that customers can see during heat waves today. Baseline credits cover a customer's average use however they can be inadequate in dealing with heat waves which can drive customers into the upper tier usage if they require air-conditioning for prolonged periods of time and/or are home all day. Today's upper tier rates are significantly higher than the summer on-peak rate for the optional TOU rate in 2015 of \$0.196/kWh and the default TOU rate in 2018 of \$0.272/kWh. By removing fixed and distribution demand cost from the variable rate SDG&E's proposals mitigate the significant impacts which can occur from heat waves coupled with today's significantly inclining tier block structure.

In addition, nothing about SDG&E's proposal will alter the discount that is allowed under CARE. If the Commission identifies additional customer segments beyond those that are eligible for CARE, the SDG&E can modify its proposal to meet the needs of those customers. By providing assistance directly to at risk customers based on their need, as opposed to distorting rate designs to accomplish these objectives, SDG&E's proposals will enable these customers to actively participate in energy efficiency and demand response programs as they are subject to the same rates as other customers who are targeted for participation. This is consistent with the Commission's Rate Design Principle 7 (*"Rates should avoid cross-subsidies, unless the cross-subsidies appropriately support explicit state policy goals"*) as customer savings realized from demand response and energy efficiency reduces the required subsidies necessary to protect these customers. Providing the subsidy outside of rate design also allows these customers to participate in any rate including the optional TOU rate in 2018 which more closely matches the cost of service for these customers. Affording these customers the choice

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of rate designs is consistent with Commission Rate Design Principle 6 *Rates should provide stability, simplicity and customer choice*. That choice includes rate options such as the optional un-tiered TOU rate in 2018 and satisfies the remaining Rate Design Principles of the Commission can be achieved for these at risk customers:

(1) Low-income and medical baseline customers should have access to enough electricity to ensure basic needs (such as health and comfort) are met at an affordable cost; (2) Rates should be based on marginal cost; (3) Rates should be based on cost-causation principles; (4) Rates should encourage conservation and energy efficiency; (5) Rates should encourage reduction of both coincident and non-coincident peak demand; and (8) Rates should encourage economically efficient decision-making. The Commission's Rate Design Principle 10 will be address in the March 21, 2014 supplemental filing.

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Fixed Charges, Demand Charges and Minimum Bills

11) (SPONSORED BY CYNTHIA FANG) If your proposal contains fixed charges, demand charges, or minimum bills that are higher than current minimum bills, describe such charges, and why they are appropriate. Please state whether such charges reflect different costs of serving multi-family vs. single-family customers, or other cost-based distinctions among residential households. If no such cost-based distinctions among residential households should apply with respect to fixed charges, demand charges, and/or minimum bills, please explain your rationale for reaching that conclusion.

SDG&E's cost studies identify two cost components to the distribution system for providing service to customers: distribution customer costs and distribution demand-related costs.

A distribution rate structure that would reflect transparent and accurate price signals would be based on the following rate structure in order to recover distribution costs in the same manner as that in which they are incurred:

- MSF (\$/month) for the recovery of distribution-related customer costs, differentiated by customer class. Currently only non-residential customers have a MSF.
- Non-coincident Demand ("NCD") Charge (\$/kW) for the recovery of distribution demand related distribution costs, through a dollar per kW NCD charge structure based on distribution usage, differentiated by customer class and voltage level. However, a NCD is not being proposed for residential customers at this time.

Currently, SDG&E residential customers are subject to a minimum bill charge on a per day basis. A minimum bill charge is a mechanism that is intended to recover a minimum level of revenue recovery, recognizing that some costs are still incurred to maintain service even in the event that a customer does not use energy. A minimum bill charge however does not provide customers with a price signal that reflects the fact that some of the costs of utility service are incurred on a fixed cost basis. In SDG&E's 2012 GRC P2, SDG&E identified the average distribution customer costs of providing service to residential customers as \$10.64 per

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month and the distribution demand costs of providing service to residential customers as \$5.85 per kW per month. Updated for current revenues, average distribution customer costs would be \$14.56 and for distribution demand \$8.00 per kW per month. SDG&E proposes to replace the minimum bill charge with a monthly MSF of \$5 beginning January 1, 2015, \$7.50 in 2016, \$10 in 2017 and begin the annual CPI adjustment to MSF in 2018, with the residual distribution customer and demand costs continuing to be recovered through a volumetric (\$ per kWh) distribution rate.

SDG&E proposes that this change be applicable to all residential customers, excluding only master-metered customers at this time. The cost of service associated with distribution customer costs to master-meter customers differs from separately metered customers. While the customer of record is the master-meter, the customer costs are dependent on the number of customer behind the meter adjusted for the level of service provided. Due to these differences, SDG&E proposes to retain the minimum bill charge structure for master meter customers and proposes an increase of the current \$0.17 per day to \$0.30 per day for non-CARE and maintain the \$0.17 level for CARE in 2015, with annual CPI adjustments beginning 2016.

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12) (SPONSORED BY CYNTHIA FANG) Should such charges be phased in over time concurrent with other changes proposed herein? If so on what timetable?

SDG&E proposes a transition path for residential tiered rates to reach a 20% differential by 2018. SDG&E further proposes to use the revenues associated with the residential MSF to reduce upper tier rates as one of the mechanisms to meet the transition path for tiered rates. The specific transition path is presented in SDG&E response to Q1 above.

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13) (SPONSORED BY CYNTHIA FANG) For any proposed fixed charges address how your proposed charges satisfy the following criteria contained in AB 327.

- *Reasonably reflect the different costs of serving small and large customers.*
- *Not unreasonably impair incentives for conservation, customer generation, and energy efficiency.*
- *Not overburden low income customers.*

SDG&E proposes the introduction of a MSF, or fixed charge. SDG&E proposes to implement the MSF consistent with the recommendations set forth in the ED proposal for a transition in the event a fixed charge is proposed. The level of fixed charge being introduced is well below the SDG&E cost of service for customer costs and do not vary by size for the standard residential rate schedule. Differences in the cost of serving small and large customers would result from differences in distribution demand cost of service. SDG&E's proposed optional TOU does include a demand-differentiated monthly service fee (DDMSF) for the recovery of distribution customer and demand costs, but a DDMSF is not being proposed for the default rate. The DDMSF does reflect some of the differences in the cost of serving small and large customers. SDG&E's residential MSF during the 2015-2018 time period would be below cost-based levels for the recovery of customer costs but would constitute a forward movement towards more accurate price signals. In the event that this change in structure results in insufficient incentives to support state and Commission objectives related to conservation, customer generation, and energy efficiency, SDG&E recommends that any incentives that are deemed necessary to fulfill these policy goals be set forth in a clear and transparent manner rather than being buried in the rate design. Consistent with AB 327 and the guidance provided in the ED proposal, SDG&E's recommendation is to set the CARE MSF at 50% of non-CARE MSF levels until the introduction of annual CPI adjustments. In addition, CARE customers would continue to receive all other subsidies, specifically, line-item discount and exemptions.

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CARE, Family Electric Rate Assistance (FERA), and Medical Baseline Programs

14) (SPONSORED BY CYNTHIA FANG) *What level of CARE discount are you proposing for the years 2015-2018, and how will your CARE proposal satisfy the following criteria in 2015 and in subsequent years:*

- a) The average effective CARE discount shall not be less than 30 percent or more than 35 percent of the revenues that would have been produced for the same billed usage by non-CARE customers.***
- b) That low-income ratepayers are not jeopardized or overburdened by monthly energy expenditures, pursuant to subdivision (b) of Section 382.***
- c) That the level of the discount for low-income electricity ratepayers correctly reflects the level of need as determined by the needs assessment conducted pursuant to subdivision (d) of Section 382.***
- d) If the level of CARE discount is current above 35% the currently effective discount in excess of this amount should be reduced by a reasonable amount on an annual basis.***

As shown in Table CF-7 of the prepared direct testimony of SDG&E witness Cynthia Fang (Chapter 2), SDG&E's current average effective CARE discount for residential customers is 39% based on rates implemented on February 1, 2014. In addition, as stated in Table CF-11 of Ms. Fang's testimony, SDG&E's current average CARE discount for small commercial and medium/large commercial & industrial ("M/L C&I") customers is 47% and 51%, respectively. Because these effective discounts exceed the 30% to 35% legislative range adopted in AB 327, SDG&E is proposing a transition path to move the effective discount into the legislative range through reasonable and gradual reductions, to be implemented on an annual basis. In accordance with Section 739.1(c)(2) of the Public Utilities Code, as amended by AB 327, SDG&E is proposing to transition the effective CARE residential discount to the effective CARE discount in effect based on SDG&E's January 1, 2013 rates of 34%. In order to avoid any rate shock through the introduction of this CARE discount change, SDG&E is proposing to reduce the average effective CARE discount for residential customers to 38% in 2015 and by 2% annually thereafter beginning January 1, 2016, until the 34% effective discount is reached, as addressed in Ms. Fang's testimony. In addition, as discussed in the testimony of Ms.

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Fang, the non-residential average effective CARE discount will be reduced by 3% annually for small commercial customers and by 4% annually for M/L C&I customers each year beginning January 1, 2015 to reach the 35% legislated maximum effective CARE discount by 2018.

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15) (SPONSORED BY CYNTHIA FANG) Describe how you propose to structure and operate the FERA program in each year of your rate design proposal.

For customers that do not meet the qualifications for CARE, the Family Electric Rate Assistance Program (“FERA”) provides another option for assistance for customers meeting eligibility requirements including income guidelines. Customers eligible for FERA are billed Tier 2 rates for Tier 3 usage. Under SDG&E’s proposal, FERA customers will continue to be billed Tier 2 rates for Tier 3 usage; however, as with all residential customers on tiered rates, their Tier 1 rate will increase to Tier 2 levels. SDG&E does not propose any changes to the structure or operation of the FERA program as part of this filing. SDG&E notes that programs tied to the current rate structure should be re-examined. SDG&E recommends a program structure that would provide customers with accurate price signals and address incentives outside of rate design in a manner that creates accurate and transparent price signals.

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16) (SPONSORED BY CYNTHIA FANG) Describe how you propose to structure and operate the Medical Baseline program in each year of your rate design proposal.

Customers eligible for medical baseline usage receive an additional baseline allowance of 16.5 kWh per day per device. In addition, medical baseline customers are exempt from DWR-BC and pay a reduced rate, with non-CARE medical baseline customers historically paying the CARE rate prior to the 20% line item discount and CARE surcharge. CARE medical baseline customers receive full CARE rate benefits. Under SDG&E's proposal, all medical baseline customers would continue to receive an additional baseline allowance of 16.5 kWh per day per device and exemption from the DWR-BC with non-CARE medical baseline customers now paying non-CARE rates (less the DWR-BC exemption) and CARE medical baseline customers paying the new CARE rates with the new line item discount. SDG&E proposes to implement this transition over a 4-year period for non-CARE medical baseline customers such that non-CARE medical baseline customers would pay non-CARE rates otherwise applicable to other non-CARE customers by 2018 less the DWR-BC exemption. Specifically, beginning January 1, 2015, the medical baseline rates will increase by 25% of the differential between non-CARE and medical baseline rates and each subsequent year until 2018. SDG&E notes that programs tied to the current rate structure should be re-examined. SDG&E does propose to move non-CARE medical baseline rates to be in line with other non-CARE rates. SDG&E recommends a program structure that would provide customers with accurate price signals and address incentives outside of rate design in a manner that is direct and transparent.

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Greenhouse Gas (GHG) Costs Embedded in Residential Rates

17) (SPONSORED BY CYNTHIA FANG) *When do you propose to embed GHG costs in residential rates?*

Consistent with D.13-12-041, SDG&E will include GHG costs in residential rates beginning April 1, 2014.

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18) (SPONSORED BY CYNTHIA FANG) *Quantify the rate impact of including GHG costs in residential rates.*

Upon implementation of the GHG costs in rates on April 1, 2014, SDG&E's residential customers are expected to see an increase in revenue requirement of \$640.9 million resulting in an increase from the current class average residential rate of \$0.20619 per kWh to \$0.21459 per kWh, or an increase of \$0.00840 or 4.07%.

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Impact of Rate Design Changes on and Coordination with other Commission Demand-Side Management Programs: Customer Generation, Demand Response, and Energy Efficiency

19) (SPONSORED BY CHRIS YUNKER) How would proposed rate design changes affect the IOU's ability to meet or exceed Commission-adopted energy efficiency (EE) and demand response (DR) goals?

SDG&E's proposal will expand the pool of customers and sales that can be targeted for EE and DR goals. Currently, 16% of SDG&E's sales come from non-care customers that have all usage in Tier 1 and have no incentive to reduce, while roughly 30% of residential sales are exposed to higher tier 3 and 4 prices. Accurate price signals with direct incentives are able to target 100% of SDG&E's sales. When all tier usage is made to accurately reflect system costs, all customers will be encouraged to evaluate their participant costs and return on investments. This should in turn encourage more EE and Demand Response Program ("DRP") participation. Measures and installations for HVAC, load control devices (e.g. pool pumps and Programmable Communicating Thermostats, ["PCTs"]) will become more cost effective from the customer's perspective, and encourage customers to install these measures at their own cost. This could lead to market transformation, thereby reducing the need for ratepayer-funded EE/DRP incentives.

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20) (SPONSORED BY CHRIS YUNKER) If you are proposing or piloting new EE measures for use of programmable and communicating thermostats (and other similar devices) please describe such efforts and discuss how such EE measures are or should be coordinated with efforts to encourage adoption of TVP rates.

SDG&E's plan is to combine TVP rates, technology such as PCTs, and EE and DR programs in such a way they provide the maximum value to the customer and the grid. The idea being is to make it easy and affordable for the customer to participate in these rates and increase participation. SDG&E is currently segmenting its customers to best determine which ones are most inclined to participate in a TVP rate and or program and then Target marketing the various technologies we can offer including a PCT. A PCT interact with SDG&E rates by providing enabling technology to a customer so they can easier participate in a demand response program or rate such as Peak Time Rebate ("PTR") or Critical Peak Pricing ("CPP"). SDG&E is also studying the potential energy efficiency economic benefit for the customer in terms of a reduction in energy use. Today that energy efficiency benefit comes without are regard for when that energy reduction occurs on a daily recurring basis. By introducing default TOU rates PCTs have the potential to reduce energy consumption on a daily basis during periods where SDG&E incurs higher costs to generate that energy.

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21) (SPONSORED BY CHRIS YUNKER) Please quantify and discuss the impacts of any rate design changes on customer participation and load impact in EE, DR, and distributed generation (DG) programs (for example estimate the elasticity factor and Ex Ante load impact to answer this question).

SDG&E is proposing a TOU pilot in this proceeding. The information from this pilot will enable us to better predict what the ex-ante load impacts of a default residential time of use rate will be. While SDG&E expects that default residential TOU rates will increase customer awareness of how prices vary by time period and therefore increase awareness and participation in EE and DR programs, at this time SDG&E does not have enough information to quantify this effect. SDG&E is also proposing other changes to the standard rate structure to create rates that more closely reflect the cost-of service. SDG&E does not expect these other changes to have negative impacts on participation in EE, DR or distributed generation programs, but rather open up a larger percentage of residential sales for participation in such programs.

Energy Efficiency is accomplished primarily through rebates and technology incentives. These are coupled with retail rates to provide customers bill savings to encourage the adoption of energy efficient measures. With upper tiers reflecting only 1/3 of residential retail sales, incentives that are provided to encourage adoption with the upper tier rates miss incentivizing 2/3 of residential sales. If tiers are removed and rebates and incentives are provided that encourages adoption of EE technologies, then 100% of sales would be encouraged to be adopted.

SDG&E's evaluation of energy procurement contracts, SDG&E's retail rates and SDG&E's EE and DR programs will all be based on the same time periods as proposed in the Rate Design Window which aligns the time periods used for evaluation of California's Loading Order. SDG&E will be updating its avoided cost calculations to reflect an on-peak period of 2 p.m. to 9 p.m. for the summer, which are the same time periods used to evaluate SDG&E's procurement contracts as well as the same time periods that were proposed in SDG&E's Rate Design Window Application for retail rates.

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22) (SPONSORED BY CHRIS YUNKER) How would the proposed rate design changes affect the value of net energy metered facilities for customer generators and the cost born by non-participants?

Net Energy Metering (“NEM”) customers are eligible for the otherwise applicable rate. As such, the rate reform that impacts residential NEM customers is SDG&E’s schedule DR. NEM allows a customer to avoid the variable rate so the impact on NEM customers is driven by changes in the levels of the upper and lower tiers.

The net impact of SDG&E’s rate reform proposals on a NEM customer’s bill is driven by the percentage of retail sales they avoid in the upper and lower tiers and the percentage of sales remaining in the upper and lower tiers after the NEM facilities generation has been netted out of their monthly usage.

SDG&E proposes to reduce the tier differentials, which reduces the avoided upper tier rate. However, this also increases the avoided lower tier rate. In that way there is a degree of offset in the value to NEM of a declining upper tier rates and an increasing lower tier rate. In terms of prospective future NEM customers, the value of NEM facilities increases for lower tier customers and is decreasing for upper tier customers.

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23) (SPONSORED BY CYNTHIA FANG) Please quantify the bill impacts (including the average, median, and range) of any rate design changes on NEM customers.

The following table presents bill impacts associated with SDG&E proposed 2015 rates compared to current effective rates for a sample of approximately 15,000 NEM customers currently receiving standard residential service (Schedule DR). Only accounts with 12 months of billing from November 2012 – October 2013 were included.

The bill impacts presented reflect the impact to monthly bills of SDG&E’s proposal for changes to the standard residential rate schedules for residential customers. The bill impacts below are not intended to reflect actual NEM bills and do not account for other provisions such as annual true-up and AB 920 net surplus compensation.

Note: Actual NEM bills store excess generation dollars in a bank that gets applied as rolling credits on a monthly basis. At year-end true-up, any excess dollars in the customer’s bank are zeroed out and if the customer is a net generator for the year, they receive a Net Surplus Compensation Credit (NSC) based only on their net generation for the year.

For purposes of measuring the bill impact of the proposed rates, only NEM consumption was used. Net generators for the month were displayed as zero, no rolling credits were applied with no bank and no NSC credit at true-up. Leaving generation credits out of the calculations clarified the impact of the proposed rates on NEM customers.

% Bill Impact Range	Avg. Monthly Bill Impact	# of Customers	Avg. Monthly kWh	Avg. Monthly Bill @ current rates 2/1/14	Avg. Monthly Bill with 2015 proposed rates
-30% to -25%	-\$337	73	3,794	\$1,275.79	\$938.95
-25% to -20%	-\$100	430	1,471	\$446.76	\$346.40
-20% to -15%	-\$42	909	880	\$237.77	\$196.04

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-15% to -10%	-\$19	1,248	628	\$152.58	\$133.48
-10% to -5%	-\$8	1,451	472	\$104.50	\$96.57
-5% to 0%	-\$2	1,911	351	\$72.27	\$70.35
0% to 5%	\$1	1,815	290	\$55.69	\$56.99
5% to 10%	\$3	1,962	222	\$40.31	\$43.28
10% to 15%	\$4	2,040	170	\$29.88	\$33.56
15% to 20%	\$4	1,598	145	\$24.77	\$29.06
20% to 25%	\$5	932	128	\$21.42	\$26.16
25% to 30%	\$5	471	110	\$18.21	\$23.15
30% to 35%	\$5	192	89	\$14.88	\$19.65
35% to 40%	\$5	78	80	\$13.38	\$18.35
40% to 45%	\$5	30	66	\$11.22	\$15.94
45% to 50%	\$5	13	58	\$9.83	\$14.49
50% to 55%	\$4	6	47	\$8.43	\$12.87
55% to 60%	\$4	4	42	\$7.56	\$11.87
65% to 70%	\$5	1	51	\$8.05	\$13.52
Total	-\$7.51	15,164	368	\$85.41	\$77.91

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24) (SPONSORED BY CHRIS YUNKER) How would the proposed rate design changes impact the value of customer-side distributed energy storage systems?

The introduction of a TOU rate provides a price signal to customers based on the cost of energy at different times of the day. The current tiered rate structure does not send a price signal based on periods of high or low cost. The value of batteries is the ability to move energy production from one period to energy use in another. In that way, the introduction of optional TOU rates proposed by SDG&E supports the adoption of distributed storage systems. However, the rate design that SDG&E proposes is designed to recover a customer's cost of service and not designed with the purpose of unlocking the full value of customer-side distributed storage or mitigating cost shifts that can occur when a technology unbundles services that are bundled within a utility's rate structure.

SDG&E is actively engaging parties in the energy storage market to better understand the technical opportunities as well as the limitations, the various business models that are emerging within the industry, and the activities which may better support energy storage. SDG&E believes that rate reform is critical for customers to realize the full potential of energy storage and achieve a sustainable mass deployment of customer-side energy storage systems. Until this time, residential customers' only incentive is to install configurations with limited capabilities, focused solely on customer-side benefits.

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Additional Details on TOU Rates, Time Periods and Seasons

25) (SPONSORED BY CYNTHIA FANG) For any default and optional TOU rate proposed describe in detail:

*** Peak to off-peak ratios and semi-peak to off-peak ratios by season**

*** TOU time periods by season**

SDG&E defines a cost-based rate as one that is based on marginal cost (Principle 2) and cost-causation principles (Principle 3). TOU rate structures are ones that reflect cost-basis for commodity rates. SDG&E’s proposed TOU rate options for both optional TOU beginning 2015 and default TOU beginning 2018 would have TOU ratios and seasonal differences in commodity rates that reflect the marginal cost and cost causation of providing commodity service. For SDG&E’s current TOU periods and adjusted for implementation of D.14-01-002 this presents as a 2.0 ratio of peak to off-peak and 1.4 ratio of semi-peak to off-peak for summer and a 1.5 ratio of peak to off-peak and 1.3 ratio of semi-peak to off-peak for winter. In addition, for flat seasonal rates, the ratio is 1.9 for summer/winter. The seasonal differences are largely driven by the seasonal differences associated with commodity capacity costs.

Residential Commodity Rates		
Summer Energy	(\$/kWh)	0.10540
	On-Peak (\$/kWh)	0.15061
	Semi-Peak (\$/kWh)	0.10540
	Off-Peak (\$/kWh)	0.07464
Winter Energy	(\$/kWh)	0.05503
	On-Peak (\$/kWh)	0.07874
	Semi-Peak (\$/kWh)	0.06719
	Off-Peak (\$/kWh)	0.05117

Additionally, the TOU and seasonal ratios of the total rates will depend upon the level of distribution recovery in volumetric rates (cents/kWh).

While AB 327 removed the constraints to residential rate design previously legislated by AB 1X and SB 695 that resulted in current tiered rates, AB 327 still contained some constraints to residential rate design, in

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particular beginning January 1, 2015, fixed charges that do not exceed ten dollars (\$10) per residential customer account per month for customers not enrolled in the CARE program and five dollars (\$5) per residential customer account per month for customers enrolled in the CARE program that may be adjusted by no more than the annual percentage increase in the Consumer Price Index beginning January 1, 2016 for any default rate schedule, at least one optional tiered rate schedule, and at least one optional time variant rate schedule, where a “Fixed charge” is defined as “any fixed customer charge, basic service fee, demand differentiated basic service fee, demand charge, or other charge not based upon the volume of electricity consumed.”

As noted in testimony of Ms. Fang, a rate structure that would reflect cost-basis for distribution would be one that has a fixed charge for recovery of fixed costs (i.e., customer costs) and a NCD charge for the recovery of distribution demand costs. The constraints imposed by AB 327 for residential fixed charge results in only partial cost recovery of fixed costs through a fixed charge and only allows for the recovery of distribution demand costs through a volumetric rate (\$/kWh) over the time period addressed in this proceeding. The more recovery of distribution costs through volumetric rates, the lower the ratios by TOU and season. SDG&E’s proposed TOU optional rate with a DDMSF, which has distribution recovery removed from the volumetric rate, the total rate ratio moves closer to the more cost-based ratios represented by the TOU and seasonal ratios in the commodity rates.

SDG&E’s proposed Options TOU rate with DDMSF beginning 2015:

- Peak to off-peak ratios and semi-peak to off-peak ratios by season – Ratios for Total Volumetric Rate
 - Summer
 - Peak to off-peak = 1.6
 - Semi-peak to off-peak = 1.3
 - Winter
 - Peak to off-peak = 1.3
 - Semi-peak to off-peak = 1.2

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SDG&E Proposed 2015 Optional TOU with DDMSF		
DDMSF		
	0 to < 3kW (\$/Month)	27.78
	3 to < 6kW (\$/Month)	48.42
	6+ kW (\$/Month)	79.53
Summer Energy		
	On-Peak (\$/kWh)	0.19631
	Semi-Peak (\$/kWh)	0.15110
	Off-Peak (\$/kWh)	0.12034
Winter Energy		
	On-Peak (\$/kWh)	0.12444
	Semi-Peak (\$/kWh)	0.11289
	Off-Peak (\$/kWh)	0.09387

SDG&E's proposed Default TOU rate beginning 2018:

- Peak to off-peak ratios and semi-peak to off-peak ratios by season– Ratios for Total Volumetric Rate
 - Summer
 - Peak to off-peak = 1.4
 - Semi-peak to off-peak = 1.2
 - Winter
 - Peak to off-peak = 1.1
 - Semi-peak to off-peak = 1.1

SDG&E Proposed 2018 Default TOU with 130% baseline credit		
Monthly Service Fee	\$/Month	10.21
Summer Energy		
	On-Peak (\$/kWh)	0.27279
	Semi-Peak (\$/kWh)	0.22758
	Off-Peak (\$/kWh)	0.19682
Winter Energy		
	On-Peak (\$/kWh)	0.21351
	Semi-Peak (\$/kWh)	0.20196
	Off-Peak (\$/kWh)	0.18594
130% Baseline Credit Summer	\$/kWh	(0.03793)
130% Baseline Credit Winter	\$/kWh	(0.03163)