## MIPUG EXHIBIT 20-3

PUB/MH I-216(b) example - DSM versus new supply (e.g. showerhead)

	F OD/ IV		- Daivi vei	Sus Hew Sup	piy (e.g. showerneau)		
Part 1 - PUB/MH I-216b example Utility		Example #1	Example #2	Example #3	Example #4		
		Existing	Add Supply	Add DSM	Add DSM		
				100 GW.h at \$0.10/kW.h	100 GW.h at \$0.10/kW.h	100 GW.h at \$0.027/kW.h	
	row			new gen or lost exports			
	1	Net Revenue Req (\$M)	\$70	\$70	\$70	\$70	
	2	added: gener. or lost exp.	0	\$10	0	0	
	3	added: DSM cost	0	0	\$10	\$2.7_	
	4(1+2+3)	Total	\$70	\$80	\$80	\$72.7	
	5	Sales(GW.h)	1,000	1,000	1,000	1,000	
	6	added: growth	0	100	100	100	
	7	less: DSM	0	-	- 100	100_	
	8(4+5+6)	Total	1,000	1,100	1,000	1,000	
	9 (4/8)	Average Rate (\$/kW.h)	\$0.0700	\$0.0727	\$0.0800	\$0.0727	
	Customer				participating non participating	participating non participating	
					customer customer	customer customer	
	10	Usage (kW.h/yr)	10,000	10,000	9,000 10,000	9,000 10,000	
	12 (9*10)	Bill (\$/yr)	\$700.00	\$727.00	\$720.00 \$800.00	\$654.30 \$727.00	

Part 1 - P Utility	UB/MH I-216b example	Example #1 Existing	Example #2 Add Supply	Add	ample #3	Add [		
			100 GW.h at \$0.10/kW.h	100	GW.h at \$0.10/kW.h	100 GW.h at \$0.027/kW.h		
row	Not Povonuo Pog (\$M)	¢70	new gen or lost exports \$70		\$70	\$70		
Net Revenue Req (\$M) added: gener. or lost		\$70 ex 0	\$10		0	0		
3	added: DSM cost	0	0		\$10		\$2.7	
4(1+2+3)	Total	\$70	\$80	_	\$80	\$72.7		
5	Sales(GW.h)	1,000	1,000		1,000		1,000	
6	added: growth	-	100		100		100	
7	less: DSM		<u>-</u>	<u>- 100</u>		<u>- 100</u>		
8(4+5+6)	Total	1,000	1,100	1,000		1,000		
9 (4/8)	Average Rate (\$/kW.h)	\$0.0700	\$0.0727	\$0.0800		\$0.0727		
Customer				participating customer	non participating customer	participating customer	non participating customer	
10	Usage (kW.h/yr)	10,000	10,000	9,000	10,000	9,000	10,000	
12 (9*10)	Bill (\$/yr)	\$700.00	\$727.00	\$720.00	\$800.00	\$654.30	\$727.00	
Part 2 - D	SM Ratios							
	Manada al Danastila	ΦΩ 10/L\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	- F					
13	Marginal Benefits		of new generation or lo	exports				
14 15		-Energy Benefits \$0.03/kW.h water saving						
16	ASSUMED Program Costs \$0.02/kW.h advertising ASSUMED Product Costs \$0.09/kW.h purchase and in			Example #3		Example #4		
10	ASSUMED Troduct Gosts	Ψ0.0 // KW.11 pure	mase and installation	LAC	ample # 5	LAUIT	ιριο <i>II</i> τ	
17			<b>Utility Admin Cost</b>		\$0.02		\$0.02	
18			Incentives		\$0.08		\$0.007	
19			Total Utility Cost (fro	om above)	\$0.10		\$0.027	
20	Integratec TRC Varginal Benefits	+ Non Energy Ben	efit:	\$0.10+0.03	= 1.18	\$0.10+0.03	= 1.18	
21	Metric Admin Costs	+ Product Costs		\$0.02+0.09		\$0.02+0.09		

= 0.58

= 2.03

\$0.10

\$0.09

\$0.0727+\$0.02+\$0.007

\$0.007+\$0.0727+\$0.03

\$0.10

\$0.0727+\$0.02+\$0.08

\$0.08+\$0.0727+\$0.03

\$0.09

Marginal Benefits

Customer Incentives Received + Bill Savings + Non Energy Benefits

Product Costs

Revenue Loss + Admin Costs + Incentive Cost

Utility

Metric

Ratepayer Metric

RIM

22

23

24

25

= 1.0

= 1.22

	/IH I-216(b) example - DS	SM versus ne	ew supply (e.g		n <b>d)</b> mple #3	Exan	nple #4	
Utility	•		Add Supply 100 GW.h at \$0.10/kW.	Add DSM		Add DSM 100 GW.h at \$0.027/kW.h		
row	Not Devenue Dev (¢M)	new gen or lost exports						
2	Net Revenue Req (\$M)  added: gener. or lost exp.	\$70 0	\$70 \$10		\$70 0		\$70 0	
3	added: DSM cost	0	0		<u>\$10</u>		\$2.7	
4(1+2+3)	Total	\$70	\$80		\$80		\$72.7	
5	Sales(GW.h)	1,000	1,000	1	1,000	1	1,000	
6 7	added: growth less: DSM	-	100	_	100 100	_	100	
8(4+5+6)	Total	1,000	1,100	1,000		1	1,000	
9 (4/8)	Average Rate (\$/kW.h)	\$0.0700	\$0.0727	\$0	\$0.0800		\$0.0727	
Customer				participating customer	non participating customer	participating customer	non participating customer	
10	Usage (kW.h/yr)	10,000	10,000	9,000	10,000	9,000	10,000	
12 (9*10)	Bill (\$/yr)	\$700.00	\$727.00	\$720.00	\$800.00	\$654.30	\$727.00	
	SM Ratios							
13 14	Marginal Benefits Assumed Non-Energy Benefits	\$0.10/kW.h cost \$0.03/kW.h wate	of new generation or lo er saving	ost exports				
15	Assumed Program Costs \$0.02/kW.h advertising			tallation Farmula ((2				
16	Assumed Product Costs	\$0.09/kw.n purc	hase and installation	Exan	nple #3	Exan	nple #4	
17	Utility				\$0.02	\$0.02		
18 19		Incentives \$0.08 Total Utility Cost (from above) \$0.10			<u>\$0.007</u> \$0.027			
20 21	Integrated TRC Marginal Benefits + Non Energy Benefits  Metric Admin Costs + Product Costs			\$0.10+0.03 \$0.02+0.09	= 1.18	\$0.10+0.03 \$0.02+0.09	= 1.18	
22 23	Utility RIM Marginal Benefits Ratepayer Revenue Loss + Admin Costs + Incentive Cost Metric			$\frac{\$0.10}{\$0.0727 + \$0.02 + \$0.08} = 0.58$		$\frac{\$0.10}{\$0.0727 + \$0.02 + \$0.007} = 1.0$		
24 25	Customer Incentives Received + Bill Savings + Non Energy Benefits Metric Product Costs			$\frac{\$0.08 + \$0.0727 + \$0.03}{\$0.09} = 2.03$		$\frac{\$0.007 + \$0.0727 + \$0.03}{\$0.09} = 1.22$		
Part 3 - D	SM Unit Costs						_	
26		t Costs + Admin Co	sts	\$0.09+\$0.02	= \$0.11/kW.h	\$0.09+\$0.02	= \$0.11/kW.h	
27 28 29	Metric Energy			with Non Utility Be (\$0.03 offset)	enefits included = \$0.08/kW.h	with Non Utility Benefits included (\$0.03 offset) = \$0.08/kW.h		
30 31	Utility LUC Admin Costs + Incentives Ratepayer Energy Metric			\$0.02+\$0.08	= \$0.10/kW.h	\$0.02+\$0.007	= \$0.027/kW.h	
TRC = Tot	tal Resource Cost RIM	= Rate Impact M	easure LRC =	Levelized Resour	ce Cost LU	C = Levelized Utili	ty Cost	