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

Part 1 - PUB/MH I-216b example **Utility**		Example #1 Existing	Example #2 Add Supply 100 GW.h at $0.10/kW.h new gen or lost exports	Example #3 Add DSM 100 GW.h at $0.10/kW.h		Example #4 Add DSM 100 GW.h at $0.027/kW.h	
row							
1	Net Revenue Req ($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		$0.0727	
Customer				participating customer	non participating customer	participating customer	non participating customer
10	Usage (kW.h/yr)	10,000	10,000	9,000	10,000	9,000	10,000
12 (9*10)	Bill ($/yr)	$700.00	$727.00	$720.00	$800.00	$654.30	$727.00

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

Part 1 - PUB/MH I-216b example
Utility

row		Example #1 Existing	Example #2 Add Supply 100 GW.h at $0.10/kW.h new gen or lost exports	Example #3 Add DSM 100 GW.h at $0.10/kW.h	Example #4 Add DSM 100 GW.h at $0.027/kW.h
1	Net Revenue Req ($M)	$70	$70	$70	$70
2	added: gener. or lost ex	0	$10	0	0
3	added: DSM cost	0	0	$10	$2.7
4(1+2+3)	Total	$70	$80	$80	$72.7
5	Sales(GW.h)	1,000	1,000	1,000	1,000
6	added: growth	-	100	100	100
7	less: DSM	-	-	- 100	- 100
8(4+5+6)	Total	1,000	1,100	1,000	1,000
9 (4/8)	Average Rate ($/kW.h)	$0.0700	$0.0727	$0.0800	$0.0727

Customer

row		Existing	Add Supply	Example #3 participating customer	Example #3 non participating customer	Example #4 participating customer	Example #4 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 - DSM Ratios

row				
13		Marginal Benefits	$0.10/kW.h cost of new generation or lost exports	
14	ASSUMED	Non-Energy Benefits	$0.03/kW.h water saving	
15	ASSUMED	Program Costs	$0.02/kW.h advertising	
16	ASSUMED	Product Costs	$0.09/kW.h purchase and installation	

		Example #3	Example #4
17	Utility Admin Cost	$0.02	$0.02
18	Incentives	$0.08	$0.007
19	Total Utility Cost (from above)	$0.10	$0.027

row			Example #3		Example #4	
20	Integrated TRC	$\dfrac{\text{Marginal Benefits + Non Energy Benefits}}{\text{Admin Costs + Product Costs}}$	$\dfrac{\$0.10+0.03}{\$0.02+0.09}$	= 1.18	$\dfrac{\$0.10+0.03}{\$0.02+0.09}$	= 1.18
21	Metric					
22	Utility RIM	$\dfrac{\text{Marginal Benefits}}{\text{Revenue Loss + Admin Costs + Incentive Cost}}$	$\dfrac{\$0.10}{\$0.0727+\$0.02+\$0.08}$	= 0.58	$\dfrac{\$0.10}{\$0.0727+\$0.02+\$0.007}$	= 1.0
23	Ratepayer Metric					
24	Customer	$\dfrac{\text{Incentives Received + Bill Savings + Non Energy Benefits}}{\text{Product Costs}}$	$\dfrac{\$0.08+\$0.0727+\$0.03}{\$0.09}$	= 2.03	$\dfrac{\$0.007+\$0.0727+\$0.03}{\$0.09}$	= 1.22
25	Metric					

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

Part 1 - PUB/MH I-216b example

Utility

row			Example #1 Existing	Example #2 Add Supply 100 GW.h at $0.10/kW.h new gen or lost exports	Example #3 Add DSM 100 GW.h at $0.10/kW.h	Example #4 Add DSM 100 GW.h at $0.027/kW.h
1	Net Revenue Req ($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	$72.7
5	Sales(GW.h)		1,000	1,000	1,000	1,000
6		added: growth	-	100	100	100
7		less: DSM	-	-	- 100	- 100
8(4+5+6)	Total		1,000	1,100	1,000	1,000
9 (4/8)	Average Rate ($/kW.h)		$0.0700	$0.0727	$0.0800	$0.0727

Customer

row					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 - DSM Ratios

row					
13		Marginal Benefits	$0.10/kW.h cost of new generation or lost exports		
14	Assumed	Non-Energy Benefits	$0.03/kW.h water saving		
15	Assumed	Program Costs	$0.02/kW.h advertising		
16	Assumed	Product Costs	$0.09/kW.h purchase and installation	Example #3	Example #4
17			Utility Admin Cost	$0.02	$0.02
18			Incentives	$0.08	$0.007
19			Total Utility Cost (from above)	$0.10	$0.027

20	Integrated	TRC	$\dfrac{\text{Marginal Benefits + Non Energy Benefits}}{\text{Admin Costs + Product Costs}}$	$\dfrac{\$0.10+\$0.03}{\$0.02+\$0.09}$ = **1.18**	$\dfrac{\$0.10+\$0.03}{\$0.02+\$0.09}$ = **1.18**
21	Metric				

22	Utility	RIM	$\dfrac{\text{Marginal Benefits}}{\text{Revenue Loss + Admin Costs + Incentive Cost}}$	$\dfrac{\$0.10}{\$0.0727+\$0.02+\$0.08}$ = **0.58**	$\dfrac{\$0.10}{\$0.0727+\$0.02+\$0.007}$ = **1.0**
23	Ratepayer Metric				

24	Customer		$\dfrac{\text{Incentives Received + Bill Savings + Non Energy Benefits}}{\text{Product Costs}}$	$\dfrac{\$0.08+\$0.0727+\$0.03}{\$0.09}$ = **2.03**	$\dfrac{\$0.007+\$0.0727+\$0.03}{\$0.09}$ = **1.22**
25	Metric				

Part 3 - DSM Unit Costs

26	Integrated	LRC	$\dfrac{\text{Product Costs + Admin Costs}}{\text{Energy}}$	$\dfrac{\$0.09+\$0.02}{}$ = **$0.11/kW.h**	$\dfrac{\$0.09+\$0.02}{}$ = **$0.11/kW.h**
27	Metric				
28				with Non Utility Benefits included	with Non Utility Benefits included
29				($0.03 offset) = **$0.08/kW.h**	($0.03 offset) = **$0.08/kW.h**

30	Utility	LUC	$\dfrac{\text{Admin Costs + Incentives}}{\text{Energy}}$	$\dfrac{\$0.02+\$0.08}{}$ = **$0.10/kW.h**	$\dfrac{\$0.02+\$0.007}{}$ = **$0.027/kW.h**
31	Ratepayer Metric				

TRC = Total Resource Cost　　**RIM = Rate Impact Measure**　　**LRC = Levelized Resource Cost**　　**LUC = Levelized Utility Cost**