

Monthly Allocation of kWh using NEMA tariff for a hypothetical aggregation customer
Annual Production = Annual Aggregated Consumption = 1,500,000 kWh

PROBLEM WITH CURRENT METHOD OF ALLOCATING PRODUCTION								
1	Meter 1 doesn't receive an allocation of 57,321 (400,000 - 342,679) kWh.							
2	3,356 (403,356 - 400,000) kWh allocated to Meter 2 is more than its load, so 3, 356 kWh is forfeited to the utility.							
3	53,965 (753,965 - 700,000) kWh allocated to Meter 3 is more than its load, so 53,965 kWh is forfeited to the utility.							
	Consumption				Production			
Month	Meter 1	Meter 2	Meter 3	Total	Total	Meter 1	Meter 2	Meter 3
January	-	40,000	50,000	90,000	100%	0%	44%	56%
	0%	44%	56%	100%	78,054	-	34,691	43,363
February	-	40,000	50,000	90,000	100%	0%	44%	56%
	0%	44%	56%	100%	96,904	-	43,068	53,836
March	-	40,000	60,000	100,000	100%	0%	40%	60%
	0%	40%	60%	100%	123,073	-	49,229	73,844
April	-	40,000	60,000	100,000	100%	0%	40%	60%
	0%	40%	60%	100%	137,987	-	55,195	82,792
May	80,000	40,000	60,000	180,000	100%	44%	22%	33%
	44%	22%	33%	100%	154,194	68,531	34,265	51,398
June	80,000	40,000	60,000	180,000	100%	44%	22%	33%
	44%	22%	33%	100%	154,776	68,789	34,395	51,592
July	80,000	40,000	60,000	180,000	100%	44%	22%	33%
	44%	22%	33%	100%	164,417	73,074	36,537	54,806
August	80,000	40,000	60,000	180,000	100%	44%	22%	33%
	44%	22%	33%	100%	154,975	68,878	34,439	51,658
September	80,000	40,000	60,000	180,000	100%	44%	22%	33%
	44%	22%	33%	100%	142,666	63,407	31,704	47,555
October	-	40,000	60,000	100,000	100%	0%	40%	60%
	0%	40%	60%	100%	124,584	-	49,834	74,750
November	-	-	60,000	60,000	100%	0%	0%	100%
	0%	0%	100%	100%	92,154	-	-	92,154
December	-	-	60,000	60,000	100%	0%	0%	100%
	0%	0%	100%	100%	76,216	-	-	76,216
Total	400,000	400,000	700,000	1,500,000	1,500,000	342,679	403,356	753,965

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SOLUTION TO ENSURE CORRECT ALLOCATION OF PRODUCTION								
Step 1. For each meter, calculate load as a percent of aggregated loads based on cumulative usage rather than current month usage. Hence, consumption percentages for meters 1, 2, and 3 in June, for example, are 22%, 32%, and 46%, rather than 44%, 22%, and 33%, respectively.								
Month	Consumption				Cumulative Consumption			
	Meter 1	Meter 2	Meter 3	Total	Meter 1	Meter 2	Meter 3	Total
January	-	40,000	50,000	90,000	-	40,000	50,000	90,000
	0%	44%	56%	100%	0%	44%	56%	100%
February	-	40,000	50,000	90,000	-	80,000	100,000	180,000
	0%	44%	56%	100%	0%	44%	56%	100%
March	-	40,000	60,000	100,000	-	120,000	160,000	280,000
	0%	40%	60%	100%	0%	43%	57%	100%
April	-	40,000	60,000	100,000	-	160,000	220,000	380,000
	0%	40%	60%	100%	0%	42%	58%	100%
May	80,000	40,000	60,000	180,000	80,000	200,000	280,000	560,000
	44%	22%	33%	100%	14%	36%	50%	100%
June	80,000	40,000	60,000	180,000	160,000	240,000	340,000	740,000
	44%	22%	33%	100%	22%	32%	46%	100%
July	80,000	40,000	60,000	180,000	240,000	280,000	400,000	920,000
	44%	22%	33%	100%	26%	30%	43%	100%
August	80,000	40,000	60,000	180,000	320,000	320,000	460,000	1,100,000
	44%	22%	33%	100%	29%	29%	42%	100%
September	80,000	40,000	60,000	180,000	400,000	360,000	520,000	1,280,000
	44%	22%	33%	100%	31%	28%	41%	100%
October	-	40,000	60,000	100,000	400,000	400,000	580,000	1,380,000
	0%	40%	60%	100%	29%	29%	42%	100%
November	-	-	60,000	60,000	400,000	400,000	640,000	1,440,000
	0%	0%	100%	100%	28%	28%	44%	100%
December	-	-	60,000	60,000	400,000	400,000	700,000	1,500,000
	0%	0%	100%	100%	27%	27%	47%	100%
Total	400,000	400,000	700,000	1,500,000				

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SOLUTION TO ENSURE CORRECT ALLOCATION OF PRODUCTION

Step 2. For each meter, multiply cumulative load percentages from step 1 with cumulative production, to get cumulative allocations for the current period. For June, the cumulative allocations for meters 1, 2, and 3 are computed by multiplying 744,988 kWh by 22%, 32%, and 46%.

Step 3. For each meter, compute the current production allocation for the current period by subtracting the cumulative production allocation for the prior period from the cumulative production allocation for the current period. For June, the current period allocations of 76,762 kWh, 30,828 kWh, and 47,186 kWh for meters 1, 2, and 3, are computed by subtracting 84,316 from 161,078 for meter 1; 210,790 from 241,618 for meter 2; and 295,106 from 342,292 for meter 3.

Month	Cumulative Production				Cum. Prod.	Production			
	Meter 1	Meter 2	Meter 3	Total		Meter 1	Meter 2	Meter 3	Total
January	0%	44%	56%	100%		-	34,691	43,363	78,054
	-	34,691	43,363	78,054	78,054	0%	44%	56%	
February	0%	44%	56%	100%		-	43,068	53,836	96,904
	-	77,759	97,199	96,904	174,958	0%	44%	56%	
March	0%	43%	57%	100%		-	49,968	73,105	123,073
	-	127,728	170,303	123,073	298,031	0%	41%	59%	
April	0%	42%	58%	100%		-	55,859	82,128	137,987
	-	183,587	252,431	137,987	436,018	0%	40%	60%	
May	14%	36%	50%	100%		84,316	27,203	42,675	154,194
	84,316	210,790	295,106	154,194	590,212	55%	18%	28%	
June	22%	32%	46%	100%		76,762	30,828	47,186	154,776
	161,078	241,618	342,292	154,776	744,988	50%	20%	30%	
July	26%	30%	43%	100%		76,158	35,158	53,102	164,417
	237,236	276,775	395,393	164,417	909,405	46%	21%	32%	
August	29%	29%	42%	100%		72,402	32,862	49,711	154,975
	309,638	309,638	445,104	154,975	1,064,380	47%	21%	32%	
September	31%	28%	41%	100%		67,564	29,844	45,258	142,666
	377,202	339,482	490,362	142,666	1,207,046	47%	21%	32%	
October	29%	29%	42%	100%		8,778	46,498	69,308	124,584
	385,980	385,980	559,671	124,584	1,331,630	7%	37%	56%	
November	28%	28%	44%	100%		9,516	9,516	73,122	92,154
	395,496	395,496	632,793	92,154	1,423,784	10%	10%	79%	
December	27%	27%	47%	100%		4,504	4,504	67,207	76,216
	400,000	400,000	700,000	76,216	1,500,000	6%	6%	88%	
Total				1,500,000		400,000	400,000	700,000	1,500,000

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SOLUTION TO ENSURE CORRECT ALLOCATION OF PRODUCTION								
Result: Production is correctly allocated to each meter based on the proportionate allocation being computed each billing period.								
	Net (Consumption - Production)				Cumulative Net			
Month	Meter 1	Meter 2	Meter 3	Total	Meter 1	Meter 2	Meter 3	Total
January	-	5,309	6,637	11,946	-	5,309	6,637	11,946
February	-	(3,068)	(3,836)	(6,904)	-	2,241	2,801	5,042
March	-	(9,968)	(13,105)	(23,073)	-	(7,728)	(10,303)	(18,031)
April	-	(15,859)	(22,128)	(37,987)	-	(23,587)	(32,431)	(56,018)
May	(4,316)	12,797	17,325	25,806	(4,316)	(10,790)	(15,106)	(30,212)
June	3,238	9,172	12,814	25,224	(1,078)	(1,618)	(2,292)	(4,988)
July	3,842	4,842	6,898	15,583	2,764	3,225	4,607	10,595
August	7,598	7,138	10,289	25,025	10,362	10,362	14,896	35,620
September	12,436	10,156	14,742	37,334	22,798	20,518	29,638	72,954
October	(8,778)	(6,498)	(9,308)	(24,584)	14,020	14,020	20,329	48,370
November	(9,516)	(9,516)	(13,122)	(32,154)	4,504	4,504	7,207	16,216
December	(4,504)	(4,504)	(7,207)	(16,216)	-	-	-	-
Total	-	-	-	-				