

**ROUGH BASE EMISSIONS AND TARGETS WITH EXAMPLE AUCTIONS AND ALLOCATIONS
FOR PACIFICORP, PGE AND POOLED COUS**

(12-2-05)

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Emission Rate (lb-CO2/MWh)					
From various NetMix spreadsheets (based on OAR 860-038-300)					
TABLE 1	(note 2004 for COUs set at 2003. Idaho Power and Self-Gen not yet included)				
	2001	2002	2003	2004	Average
PAC	1,869	1,883	1,867	1,933	1,888
PGE	1,184	1,034	1,123	1,065	1,102
COUs	274	229	88	88	170

Sales (Million MWh)					
From OPUC Stat. Books					
TABLE 2	2001	2002	2003	2004	1990
ID-Power	0.626	0.629	0.629	0.665	0.504
PAC	14.693	13.524	13.227	13.134	12.059
PGE	19.040	18.772	18.426	17.764	15.432
Total IOUs	34.359	32.925	32.282	31.563	27.995
COUs	12.616	12.854	12.908	13.271	11.008
Total Sales	46.975	45.779	45.190	44.834	39.003

T&D Losses					
PGE & PAC from NetMix, COUs Assumed					
TABLE 3	2001	2002	2003	2004	Average
PAC	12.6%	9.3%	14.4%	9.9%	11.6%
PGE	6.0%	6.0%	5.9%	6.9%	6.2%
COUs	10.0%	10.0%	10.0%	10.0%	10.0%

Loads (Million MWh)					
TABLE 4	2001	2002	2003	2004	Average
PAC	16.54	14.79	15.13	14.43	15.22
PGE	20.18	19.90	19.52	18.99	19.65
COUs	13.88	14.14	14.20	14.60	14.20
Subtotal w/o ID-Power					49.07

Utility Emissions (Million Metric Tons CO2)						2001-2004 Average Emiss. Rate and Loss with 1990 Sales		10% below "1990" The 2020 Goal (the cap)
TABLE 5	2001	2002	2003	2004	Average			
PAC	14.03	12.63	12.81	12.65	13.03	11.52		
PGE	10.84	9.33	9.94	9.18	9.82	8.19		
COUs	1.72	1.47	0.56	0.58	1.08	0.93		
Subtotal w/o ID-Power								
Power	26.6	23.4	23.3	22.4	23.94	20.6		18.6

Pg 2 **TABLE 6 2020 Allowances and Cost of Compliance**

1	2020 Auctioned Allowances if	5% of Allowances Auctioned	MMT-CO2	Auctioned	0.93		
2	Then Total 2020 Allocated Free Allowances		MMT-CO2	Free	17.65		
3	Total Allowances Issued (the cap) 18.58						
4	Reduction Needed	3.84 (MMT-CO2 from 2004 to meet 2020 cap)	17.1%	2004 Utility Retail Rev.*	\$ 2,768		
5	LSEs' Gap in 2020 if load growth is met with Cost-Effective Renewables and Conservation				Million		
6	(2004 emissions less free 2020 Allowances)				(*ID-Power		
7	If the Average Cost of Compliance in 2020 is:				% of 2004		
8	Then Net Cost of Compliance:				Retail		
9	(the composite of	\$10 per Metric Ton =	48 Million	1.7%	Revenue		
10	CO2 reduction and	\$20 per Metric Ton =	95 Million	3.4%	(Excluded)		
11	auction costs)	\$30 per Metric Ton =	143 Million	5.2%			
12	Examples of Funds Raised by Auction in 2020 (Bold values are for 5% auctioned)						
13	With a cap of	18.58 MMT-CO2	Auction Price per Metric Ton			Note: The auction price should always exceed the average cost of CO2 reductions.	
14	Annual Funds Raised for Ren. Res. and EE		\$ 10	\$ 20	\$ 30		\$ 40
15	Funds from (million \$) auction of	5%	9	19	28		37
16	Funds raised (million \$) by auction of	20%	37	74	111		149
17	Funds raised (million \$) by auction of	50%	93	186	279		372

18 **TABLE 7 Six Scenarios of First Year Issuance of Allowances**

19	(based on average emissions in the base years: 2001-2004)							
20	(MMT-CO2)	Scenario	1	2	3	4	5	6
21	Total Allowances		23.94	23.94	23.94	23.94	23.94	23.94
22	% of Total Allowances Auctioned		5%	5%	5%	20%	20%	20%
23	Allowances Distributed for Free		22.74	22.74	22.74	19.15	19.15	19.15
24	% of Free Allowances Distrib. by Emissions		95%	100%	50%	95%	100%	50%
25	% of Free Allowances Distrib. by Load		5%	0%	50%	5%	0%	50%
26	1st Year Distribution of Allowances							
27	Auctioned		1.20	1.20	1.20	4.79	4.79	4.79
28	Distrib. Free to PAC		12.11	12.38	9.72	10.20	10.42	8.18
29	Distrib. Free to PGE		9.32	9.33	9.22	7.85	7.86	7.76
30	Distrib. Free to COUs		1.31	1.03	3.81	1.10	0.87	3.20
31	Total Allowances		23.94	23.94	23.94	23.94	23.94	23.94
32								Base Period Emissions
								13.03
								9.82
								1.08

33 **TABLE 8 First Year Cost of Auctioned Allowances for the Scenarios Above**

34	(Assumes 1st year emissions equal base period and Auction Price is \$ 10.00 per MMT-CO2)							
35	(Million \$)	Scenario	1	2	3	4	5	6
36		PAC	9.18	6.52	33.14	28.30	26.06	48.48
37		PGE	5.02	4.91	6.04	19.74	19.64	20.60
38		COUs	-2.23	0.54	-27.22	-0.17	2.17	-21.21
39		Total Auction Revenue	11.97	11.97	11.97	47.87	47.87	47.87