Customers	Generators	Cost	Emission	Utility	Power Load Reduction	Loss
50	4	2.41844e5	51202.7	4.27483e5	22.1727	621.204
	8	455159.0	71835.0	1.20697e6	26.6116	536.609
	12	9.09425e5	1.52323e5	9.10228e5	10.4191	875.694
	16	1.42895e6	2.18096e5	9.25364e5	-0.53481	1092.53
	20	1.87708e6	3.00257e5	1.04759e6	-1.04443	1044.79
100	4	1.78604e5	37484.5	3.78417e5	40.0361	366.888
	8	4.56768e5	57459.6	5.9435e5	31.3451	512.932
	12	8.07607e5	1.19095e5	5.86936e5	18.4996	696.365
	16	1.30546e6	1.97634e5	511450.0	3.00497	897.525
	20	1.76955e6	2.5975e5	6.18877e5	2.75404	916.887
150	4	1.35337e5	18930.2	409218.0	58.7838	171.98
	8	4.67344e5	65409.9	6.01151e5	28.6752	498.552
	12	8.33085e5	1.2371e5	524357.0	16.5745	681.297
	16	1.32156e6	2.15662e5	4.14091e5	4.46811	891.707
	20	1.73837e6	2.786e5	4.64216e5	3.62162	848.524
200	4	1.24073e5	19962.8	4.13954e5	63.4141	142.61
	8	4.56015e5	73583.5	480642.0	27.3441	524.447
	12	8.08863e5	1.36576e5	5.84168e5	25.4518	598.368
	16	1.27931e6	1.92261e5	3.85515e5	6.70606	776.992
	20	1.7516e6	271704.0	4.58137e5	5.22481	855.964
250	4	78044.6	13731.8	4.30353e5	76.0048	62.2114
	8	3.98319e5	68432.5	5.64685e5	36.9804	400.239
	12	8.84467e5	1.45205e5	3.56302e5	10.9215	777.285
	16	1.33079e6	1.89973e5	3.38509e5	5.39039	851.435
	20	1.80768e6	2.65104e5	3.83101e5	4.8625	899.231
300	4	1.00434e5	15760.6	4.66149e5	68.0979	105.367
	8	3.23487e5	50224.3	7.19909e5	52.7182	242.796
	12	8.39066e5	1.43104e5	3.69374e5	14.5316	697.087
	16	1.36024e6	1.96631e5	3.37713e5	6.97863	925.416
	20	1.83888e6	2.69629e5	3.6212e5	4.55027	883.609
350	4	99291.2	13880.7	4.59955e5	71.006	106.415
	8	3.78109e5	57035.2	6.45181e5	43.7955	339.303
	12	9.05618e5	1.22039e5	295011.0	10.4562	758.666
	16	1.35751e6	2.05766e5	2.99672e5	5.15944	874.5
	20	1.76523e6	2.71834e5	3.1968e5	5.20916	871.626
400	4	1.035e5	16335.3	509185.0	70.8421	97.2503
	8	442456.0	55741.5	4.73481e5	31.7949	464.385
	12	7.94787e5	1.15675e5	3.72551e5	19.1577	637.722
	16	1.28993e6	190653.0	3.19329e5	8.30491	807.976
	20	1.78093e6	2.83917e5	3.07186e5	5.08603	813.606

Table 8: Results of Experiment 2.

i	a_i ($/h)	b_i ($/h)	c_i ($/h)	v_i ($/h)	d_i ($/h)	e_i ($/h)	$(ah)_i$ ($/h)	$(af)_i$ ($/h)	$p_i^{\min}$	$p_i^{\max}$	DM_i
1	45.67791083	1.636056887	0.001662884	47.3528901	1.636056887	0.001662884	45.67791083	47.77163492	3	4	117.0530458
2	39.75098342	1.956973415	0.001501585	41.42596269	1.956973415	0.001501585	39.75098342	41.84470751	3	4	86.37365214
3	39.46223396	1.859715154	0.001711129	41.13721323	1.859715154	0.001711129	39.46223396	41.55595805	4	6	112.956877
4	38.48519085	2.441243377	0.001587138	40.16017012	2.441243377	0.001587138	38.48519085	40.57891494	3	6	104.5282637
5	42.72294069	2.222259013	0.001484345	44.39791996	2.222259013	0.001484345	42.72294069	44.81666478	4	7	107.4900526

Table 9: Customer cost coefficient (Test System 1).

i	a_i	b_i	c_i	v_i	d_i	e_i	ah_i	af_i	$p_i^{\min}$	$p_i^{\max}$	$CDemand_i$
1	74.030 527 11	3.218 430 292	0.004 991 017	83.183 927 22	3.218 430 292	0.004 991 017	64.877 126 99	87.760 627 27	2	3	93.535 047 43
2	116.380 125 9	2.501 200 786	−0.003 466 97	125.533 526	2.501 200 786	−0.003 466 97	107.226 725 8	130.110 226	3	6	102.941 329 7
3	109.926 653 1	2.825 177 138	0.006 133 988	119.080 053 2	2.825 177 138	0.006 133 988	100.773 252 9	123.656 753 2	2	3	160.490 278 2
4	72.323 922 56	2.973 791 076	0.004 077 454	81.477 322 67	2.973 791 076	0.004 077 454	63.170 522 44	86.054 022 72	3	6	129.161 247 6
5	86.867 413 28	2.853 089 905	−0.002 711 57	96.020 813 39	2.853 089 905	−0.002 711 57	77.714 013 17	100.597 513 4	5	6	123.757 278 2
6	125.269 662 4	2.930 246 665	0.001 190 8	134.423 062 5	2.930 246 665	0.001 190 8	116.116 262 3	138.999 762 6	2	3	133.355 650 5
7	164.369 026 2	2.611 366 473	0.006 695 541	173.522 426 3	2.611 366 473	0.006 695 541	155.215 626 1	178.099 126 4	2	3	107.154 083 9

Table 10: Customer cost coefficient (Test System 2).

	Cost	Emission	Power	Loss
BC	122253.117	6329.699	9259.294	36.843
C2	120902.399	6176.966	9119.999	35.154
C3	124053.578	6170.417	9381.137	37.052
C4	122226.710	6304.627	9246.382	36.787

Table 11: Optimal results with various weighting factor values (Test System 1).

	Cost	Emission	Power	Loss
BC	519489.1663	54 642.511 01	16 711.074 45	222.620 811 9
C2	580775.1568	76 195.966 06	19 758.860 46	316.212 339 7
C3	546309.5155	54 327.5535	17 815.008 61	249.948 374 1
C4	522818.0403	57 149.190 83	16 845.938 25	228.552 985 7

Table 12: Optimal results with various weighting factor values (Test System 2).

Compare	**Cost**				**Emissions**				**Power**				**Loss**			
	BC	**C2**	**C3**	**C4**	**BC**	**C2**	**C3**	**C4**	**BC**	**C2**	**C3**	**C4**	**BC**	**C2**	**C3**	**C4**
DR-DEED	989 439.22	968 899.75	994 464.46	1 006 653.84	192 743.96	356 332.96	183 068.82	210 026.09	38 574.55	38 682.66	38 548.88	39 125.16	1137.11	1254.66	1120.88	1190.38
SGSD-DEED	519 489.17	580 775.16	546 309.52	522 818.04	54 642.51	76 195.97	54 327.55	57 149.19	16 711.08	19 758.86	17 815.01	16 845.94	222.62	316.21	249.95	228.55
Percentage %	47.49	40.07	45.06	48.01	71.63	78.60	70.33	72.80	56.57	48.90	53.73	56.99	80.42	74.76	77.68	80.80

Table 13: Comparison of costs, emissions, power generated, and loss (Test System 2).