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**National Program on Energy Saving and
Renewable Energy of
Republic of Armenia
Part II**

APPENDIX C: ELECTRIC ENERGY SAVING POTENTIAL FOR MAJOR CONSUMERS, WITH VARIABLE ELECTRIC MOTOR LOAD, IN CASE OF NEW TECHNOLOGY APPLICATION

N	Sector		Name of the company	Cumulative installed electric power KW	Electric power of electric motors with variable load, KW	Annual consumption of electric energy, MWh	Energy saving potential of electric motors with variable load, in case of new technology application *		
	Name	code					MWh	%	
1	2	3	4	5	6	7	8	9	10
1	INDUSTRY	Other branches of industry	15.33.9	Artachat canned food factory	3,393.80	323.70	1,000.00	93.23	9.32
2			15.98.2	"Bjni" mineral water factory CJSC	990.00	51.70	1,983.00	34.74	1.75
3			15.85.0	AAFPC NGO LTD	316.65	25.80	1,024.56	57.96	5.66
4			15.96.0	"Yerevan beer" CJSC	2,968.19	155.91	4,010.00	121.23	3.02
5			15.96.0	"Kotayk beer" factory	735.00	28.00	1,156.00	24.51	2.12
6			24.17.0	"Nairit factory" CJSC	130,121.00	11,667.80	217,391.00	665.30	0.31
7			24.13.0	"Prometey-chemprom" CJSC, chemical plant	117,004.00	1,180.65	7,185.14	615.56	8.57
8			13.20.9	"Ararat gold mining company" CJSC	22,167.64	1,262.00	46,506.64	1,047.43	2.25
9			13.20.2	"Akhtala Mining Factory" CJSC	4,092.70	409.86	4,938.01	449.66	9.11
10			13.20.2	Alaverdi metalurgy factory	11,534.00	448.60	11,150.13	1,154.70	10.36
11			13.20.2	"Kapan Mining Factory" CJSC	24,246.23	927.31	27,971.46	1,836.08	6.56
12			27.42.0	"Rusal Armenal" CJSC	51,143.00	742.40	8,611.11	317.12	3.68
13			15.12.0	"Luskert" poultry factory LTD	2,373.59	95.00	4,178.93	208.05	4.98
14					Total	371,085.80	17,318.73	337,105.98	6,625.56
15		non metal ore	26.53.0	"Gajegorts" CJSC	1,285.00	180.00	1,720.00	72.28	4.20
16					Total	1,285.00	180.00	1,720.00	72.28
17		Iron and cast iron	27.10.0	"Dzulakentron" OJSC	8,880.00	270.00	1,685.99	174.54	10.35
18			27.10.0	"Autolit" factory	22,170.00	320.00	7,353.00	42.24	0.57
19			27.35.0	"Clean metal" OJSC	1,350.00	80.00	8,684.00	122.30	1.41
20					Total	32,400.00	670.00	17,722.99	339.08
21				Total	404,770.80	18,168.73	356,548.97	7,036.92	1.97
22	Other	Trade and service	85.11.1	"Erebuni medical center" CJSC	526.80	51.00	3,297.77	66.10	2.00
23			85.11.1	"Mikaelyan surgery center" CJSC	283.00	30.00	1,399.00	62.21	4.45
24			85.11.1	St. Grigor Lusavorich medical center	9,900.00	44.00	1,798.00	38.54	2.14
25			41.00.0	"Water supply and sewage company" SCJSC	28,139.20	8,942.20	155,080.47	45,000.00	29.02

26		Total	38,849.00	9,067.20	161,575.23	45,166.85	27.95
27	agricultu re	01.41.0 "Vorogum Jrar" CJSC	165,657.19	16,565.72	109,967.37	4,000.00	3.64
28		Total	165,657.19	16,565.72	109,967.37	4,000.00	3.64
29		Total	204,506.19	25,632.92	271,542.60	49,166.85	18.11
30		Total	609,276.99	43,801.65	628,091.57	56,203.77	20.08

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APPENDIX D: CALCULATION OF ENERGY SAVING POTENTIAL BY IMPLEMENTED MEASURES

N	Type of activity	Code of economic activity	Electric energy		Natural gas	
			Number of companies	total consumption of electric energy, MWh	number of companies	total consumption of natural gas, thousand cu.m
1	2	3	4	5	6	7
1	Provision of agricultural services	01	1	91702	2	638
2	Metal ore production	13	8	370122	4	24767
3	Other branches of mining industry	14	1	838	1	1898
4	Food and beverage production	15	29	109120	47	34049
5	Tabaco production	16	2	127526	3	879
6	Tekstile production	17	2	2473	1	266
7	Publishing, and printing business	22	1	1584	0	0
8	Chemical industry	24	4	227586	5	73393
9	Rubber-plastics production	25	3	7465	1	79
10	Other branches of non-metal mining industry	26	9	102342	18	170055
11	Metal industry	27	7	27734	9	36134
12	Ready metal goods production	28	2	2728	6	1257
13	Machinery-equipment production	29	4	12780	2	1008
14	Production of electric machines and equipment	31	5	19494	3	2806
15	Production of radio and TV equipment	32	2	2585	0	0
16	Other bvranches of industry	36	3	5712	3	159
17	Production and distribution of electric energy, gas, hot water and steam	40	7	273543	11	620115
18	Collection, purification and distribution of water	41	1	155080	0	0
19	Construction	45	2	2456	4	3449
20	Trade, technical maintenance and repair of vehicles	50	7	48209	3	93899
21	Retail trade	52	4	4921	6	796
22	Hotels-restaurants	55	3	12795	3	2862
23	Ground transportation	60	4	97541	1	60
24	Air transportation	62	2	15614	3	2356
25	Communication	64	6	68630	5	432

26	Financial agent	65	1	1412	4	377
27	Real estate business	70	1	712	1	235
28	Experiments-design	73	2	6744	7	548
29	State government	75	8	168541	2	6305
30	Education	80	5	5898	13	6083
31	Provision of healthcare and social services	85	23	58701	20	8492
32	Civil activities	91	45963	692964	45971	38492
33	Population	91	848507	1439831	156668	310515
34	Organization of leisure and entertainment activities	92	6	12262	7	607
35	Foreign companies' activities	99	1	1536	2	531
36	TOTAL		894635	4179181	202836	1443539

Appendix D - continued

Energy saving measure [Fo]														
Elimination of defects and improvement of technological process [F1]					Decrease of idle process [F2]					Automatization of electric drives [F3]				
α_1	β_1	γ_1 , mln. AMD	π_1 , MWh	C_1 , mln. AMD	α_2	β_2	γ_2 , mln. AMD	π_2 , MWh	C_2 , mln. AMD	α_3	β_3	γ_3 , mln. AMD	π_3 , MWh	C_3 , mln. AMD
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
0.369	0.081	32.8	2730	67.50	0.081	0.250	22.23	1853	55.59	0.330	0.132	48.0	4000	337.5
0.235	0.086	89.8	7484	460.70	0.011	0.124	6.0	496.7	13.2	0.994	0.031	137.7	11472	183.5
										0.858	0.058	65.2	5432.6	203.0
0.448	0.045	55.3	4606	37.17	0.076	0.270	55.91	4659	139.77	0.448	0.017	20.9	1741.2	47.1
					0.185	0.258	58.6	4884.8	263.8	0.356	0.451	197.2	16432	644.4
0.868	0.025	7.2	604	30.87	0.115	0.220	8.43	702	14.33	0.211	0.280	19.7	1638.5	64.3
					0.056	0.200	1.72	143	2.58					
					0.102	0.051	1.2	101.4	5.5					
					0.076	0.150	0.35	29	0.53					
0.208	0.146	99.5	8288	3.98	0.350	0.092	105.8	8817.7	428.5	0.200	0.076	49.6	4137.0	450.0
					0.082	0.130	19.74	1645	29.61	0.355	0.817	540.0	45000	1700
					0.820	0.092	43.7	3640.9	8.7					
					0.250	0.068	19.9	1658.2	55.7					

					0.080	0.125	20.22	1685	10.11	0.36	0.088	63.75	5312	58.01
					0.086	0.310	18.7	1556.8	49.3	0.097	0.401	27.4	2282	60.8
					0.150	0.132	164.6	13721	32.93	0.33	0.107	291.23	24269	250.5
0.298	0.019	284.5	23712	600.2	0.229	0.05	547.1	45595	1110.1	0.421	0.069	1460.6	121716	3999

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