PRECIOS EN BARRA DEL SEIN, PRECIOS EN BARRA Y PRECIOS EFECTIVOS DE SISTEMAS AISLADOS

TARIFAS EN BARRA (Res. N° 067-2021-OS/CD y N°143-2021-OS/CD)

FIJACION AL 04/MAYO/2021

	TENSIÓN kV	PPMo S/.kW-mes	PEMPo ctm. S/./kW.h	PEMFo ctm. S/./kW.h
Sistema Eléctrico Interconectado Nacional (SEIN) - Res. Barra (Cuadro 1)				
Zorritos	220	21.10	19.07	17.66
Talara	220	21.10	18.94	17.56
Piura Oeste	220	21.10	18.98	17.62
Chiclayo Oeste	220	21.10	18.76	17.46
Carhuaquero	220	21.10	18.46	17.22
Carhuaquero	138	21.10	18.47	17.22
Cutervo	138	21.10	18.65	17.33
Jaen	138	21.10	18.82	17.48
Guadalupe	220	21.10	18.75	17.46
Guadalupe	60	21.10	18.81	17.50
Cajamarca	220	21.10	18.44	17.20
Trujillo Norte	220	21.10	18.64	17.39
Chimbote 1	220	21.10	18.53	17.31
Chimbote 1	138	21.10	18.56	17.33
Paramonga Nueva	220	21.10	18.18	17.05
Paramonga Nueva	138	21.10	18.15	17.03
Paramonga Existente	138	21.10	18.07	16.99
Huacho	220	21.10	18.19	17.08
Zapallal	220	21.10	18.37	17.21
Ventanilla	220	21.10	18.40	17.25
Lima	220	21.10	18.39	17.24
Cantera	220	21.10	18.19	17.12
Chilca	220	21.10	18.09	17.00
Independencia	220	21.10	18.23	17.18
Ica	220	21.10	18.27	17.22
Marcona	220	21.10	18.40	17.24
Mantaro	220	21.10	17.75	16.68
Huayucachi	220	21.10	17.80	16.80
Pachachaca	220	21.10	17.95	16.89
Pomacocha	220	21.10	17.99	16.91
Huancavelica	220	21.10	17.90	16.83
Callahuanca	220	21.10	18.13	17.02
Cajamarquilla	220	21.10	18.33	17.20
Huallanca	138	21.10	18.03	16.85
Vizcarra	220	21.10	17.89	16.71
Tingo María	220	21.10	17.59	16.36
Aguaytía	220	21.10	17.44	16.20
Aguaytía	138	21.10	17.48	16.23
Aguaytía	22.9	21.10	17.47	16.22
Pucallpa	138	21.10	17.98	16.58
Pucallpa	60	21.10	18.00	16.58
Aucayacu	138	21.10	17.86	16.60
Tocache	138	21.10	18.14	16.86
Tingo María	138	21.10	17.54	16.30
Huánuco	138	21.10	17.80	16.54
Paragsha II	138	21.10	17.75	16.58
Paragsha	220	21.10	17.71	16.53
Yaupi	138	21.10	17.42	16.29
Yuncan	138	21.10	17.55	16.40
Yuncan	220	21.10	17.60	16.44
Oroya Nueva	220	21.10	17.83	16.79
Oroya Nueva	138	21.10	17.72	16.63
Oroya Nueva	50	21.10	17.77	16.73
Carhuamayo	138	21.10	17.72	16.56
Carhuamayo Nueva	220	21.10	17.71	16.53
Cariparia	138	21.10	17.63	16.52
Desierto	220	21.10	18.21	17.15
Condorcocha	138	21.10	17.63	16.52
Condorcocha	44	21.10	17.63	16.52
Machupicchu	138	21.10	18.04	16.85
Cachimayo	138	21.10	18.58	17.31
Cusco	138	21.10	18.66	17.37
Combapata	138	21.10	18.96	17.65
Tintaya	138	21.10	19.21	17.95
Ayaviri	138	21.10	18.94	17.64
Azángaro	138	21.10	18.77	17.46
San Gaban	138	21.10	17.85	16.67
Mazuco	138	21.10	18.44	17.01
Puerto Maldonado	138	21.10	19.98	17.38
Juliaca	138	21.10	18.94	17.59
Puno	138	21.10	18.94	17.59
Puno	220	21.10	18.91	17.57
Callalli	138	21.10	18.98	17.75
Santuario	138	21.10	18.76	17.55
Arequipa	138	21.10	18.84	17.59
Socabaya	220	21.10	18.82	17.58
Cerro Verde	138	21.10	18.90	17.63
Repartición	138	21.10	19.02	17.68
Moliendo	138	21.10	19.13	17.76
Moquegua	220	21.10	18.82	17.55
Moquegua	138	21.10	18.84	17.57
Ilo ELS	138	21.10	19.01	17.70
Botiflaca	138	21.10	18.95	17.68
Toquepala	138	21.10	18.98	17.72
Aricota	138	21.10	18.85	17.69
Aricota	66	21.10	18.79	17.68
Tacna (Los Héroes)	220	21.10	18.90	17.59
Tacna (Los Héroes)	66	21.10	18.97	17.62
La Nina	220	21.10	18.76	17.46
Cotaruse	220	21.10	18.35	17.18
Carabayllo	220	21.10	18.35	17.19
La Ramada	220	21.10	18.27	17.06
Lomera	220	21.10	18.31	17.17
Asia	220	21.10	18.12	17.04
Alto Praderas	220	21.10	18.24	17.11
La Planicie	220	21.10	18.32	17.17
Belaunde	138	21.10	18.63	17.31
Caclic	220	21.10	18.54	17.25
Medio Mundo	220	21.10	18.18	17.07
Tintaya Nueva	220	21.10	19.18	17.91
Sistemas Aislados - Res. Barra (Cuadro 1) - Precios en Barra				
Adinelsa	MT	29.35	37.67	37.67
Chavimochic	MT	29.35	33.78	33.78
Edelnor	MT	29.35	33.78	33.78
Eilhicha	MT	29.35	33.78	33.78
Electro Oriente	MT	29.35	52.97	52.97
Electro Sur Este	MT	0.00	0.00	0.00
Electro Puno	MT	29.35	49.14	49.14
Electro Ucayali	MT	29.35	61.51	61.51
Electronorte	MT	0.00	0.00	0.00
Hidrandina	MT	29.35	33.78	33.78
Seal	MT	29.35	84.49	84.49
Sistemas Aislados - Res. Barra (Cuadro 13) - Precios Efectivos				
Adinelsa	MT	29.35	19.68	19.68
Chavimochic	MT	29.35	19.64	19.64
Edelnor	MT	29.35	19.64	19.64
Eilhicha	MT	29.35	17.19	17.19
Electro Oriente	MT	29.35	25.24	25.24
Electro Sur Este	MT	0.00	0.00	0.00
Electro Puno	MT	29.35	14.96	14.96
Electro Ucayali	MT	29.35	24.76	24.76
Electronorte	MT	0.00	0.00	0.00
Hidrandina	MT	29.35	19.64	19.64
Seal	MT	29.35	22.01	22.01

ACTUALIZADO AL 04/Junio/2021 CON REDONDEO

	TENSIÓN kV	PPM S/./kW-mes	PEMP ctm. S/./kW.h	PEMF ctm. S/./kW.h	PCSPT S/./kW-mes	CPSEE ctm. S/./kW.h	(PPM+PCSPT) S/./kW-mes	(PEMP + CPSEE) ctm. S/./kW.h	(PEMF + CPSEE) ctm. S/./kW.h	Potencia ctm. S/./kW.h	Energía ctm. S/./kW.h	Promedio ctm. S/./kW.h
Sistema Eléctrico Interconectado Nacional (SEIN) - Res. Barra (Cuadro 1)												
Zorritos	220	21.10	19.07	17.66	37.937		59.04	19.07	17.66	10.28	17.94	28.22
Talara	220	21.10	18.94	17.56	37.937		59.04	18.94	17.56	10.28	17.83	28.12
Piura Oeste	220	21.10	18.98	17.62	37.937		59.04	18.98	17.62	10.28	17.89	28.17
Chiclayo Oeste	220	21.10	18.76	17.46	37.937		59.04	18.76	17.46	10.28	17.72	28.00
Carhuaquero	220	21.10	18.46	17.22	37.937		59.04	18.46	17.22	10.28	17.47	27.75
Carhuaquero	138	21.10	18.47	17.22	37.937		59.04	18.47	17.22	10.28	17.47	27.75
Cutervo	138	21.10	18.65	17.33	37.937		59.04	18.65	17.33	10.28	17.59	27.87
Jaen	138	21.10	18.82	17.48	37.937		59.04	18.82	17.48	10.28	17.75	28.03
Guadalupe	220	21.10	18.75	17.46	37.937		59.04	18.75	17.46	10.28	17.72	28.00
Guadalupe	60	21.10	18.81	17.50	37.937		59.04	18.81	17.50	10.28	17.76	28.04
Cajamarca	220	21.10	18.44	17.20	37.937		59.04	18.44	17.20	10.28	17.45	27.73
Trujillo Norte	220	21.10	18.64	17.39	37.937		59.04	18.64	17.39	10.28	17.64	27.92
Chimbote 1	220	21.10	18.53	17.31	37.937		59.04	18.53	17.31	10.28	17.55	27.83
Chimbote 1	138	21.10	18.56	17.33	37.937		59.04	18.56	17.33	10.28	17.57	27.86
Paramonga Nueva	220	21.10	18.18	17.05	37.937		59.04	18.18	17.05	10.28	17.27	27.56
Paramonga Nueva	138	21.10	18.15	17.03	37.937		59.04	18.15	17.03	10.28	17.25	27.53
Paramonga Existente	138	21.10	18.07	16.99	37.937		59.04	18.07	16.99	10.28	17.20	27.49
Huacho	220	21.10	18.19	17.08	37.937		59.04	18.19	17.08	10.28	17.30	27.58
Zapallal	220	21.10	18.37	17.21	37.937		59.04	18.37	17.21	10.28	17.44	27.72
Ventanilla	220	21.10	18.40	17.25	37.937		59.04	18.40	17.25	10.28	17.48	27.76
Lima	220	21.10	18.39	17.24	37.937		59.04	18.39	17.24	10.28	17.47	27.75
Cantera	220	21.10	18.19	17.12	37.937		59.04	18.19	17.12	10.28	17.33	27.61
Chilca	220	21.10	18.09	17.00	37.937		59.04	18.09	17.00	10.28	17.22	27.50
Independencia	220	21.10	18.23	17.18	37.937		59.04	18.23	17.18	10.28	17.39	27.67
Ica	220	21.10	18.27	17.22	37.937		59.04	18.27	17.22	10.28	17.43	27.71
Marcona	220	21.10	18.40	17.24	37.937		59.04	18.40	17.24	10.28	17.47	27.75
Mantaro	220	21.10	17.75	16.68	37.937		59.04	17.75	16.68	10.28	16.89	27.17
Huayucachi	220	21.10	17.80	16.80	37.937		59.04	17.80	16.80	10.28	17.00	27.28
Pachachaca	220	21.10	17.95	16.89	37.937		59.04	17.95	16.89	10.28	17.10	27.38
Pomacocha	220	21.10	17.99	16.91	37.937		59.04	17.99	16.91	10.28	17.12	27.41
Huancavelica	220	21.10	17.90	16.83	37.937		59.04	17.90	16.83	10.28	17.04	27.32
Callahuanca	220	21.10	18.13	17.02	37.937		59.04	18.13	17.02	10.28	17.24	27.52
Cajamarquilla	220	21.10	18.33	17.20	37.937		59.04	18.33	17.20	10.28	17.42	27.71
Huallanca	138	21.10	18.03	16.85	37.937		59.04	18.03	16.85	10.28	17.08	27.37
Vizcarra	220	21.10	17.89	16.71	37.937		59.04	17.89	16.71	10.28	16.94	27.23
Tingo María	220	21.10	17.59	16.36	37.937		59.04	17.59	16.36	10.28	16.60	26.89
Aguaytía	220	21.10	17.44	16.20	37.937		59.04	17.44	16.20	10.28	16.45	26.73
Aguaytía	138	21.10	17.48	16.23	37.937		59.04	17.48	16.23	10.28	16.48	26.76
Aguaytía	22.9	21.10	17.47	16.22	37.937		59.04	17.47	16.22	10.28	16.47	26.75
Pucallpa	138	21.10	17.98	16.58	37.937		59.04	17.98	16.58	10.28	16.86	27.14
Pucallpa	60	21.10	18.00	16.58	37.937	1.8443	59.04	19.84	18.42	10.28	18.70	28.98
Aucayacu	138	21.10	17.86	16.60	37.937		59.04	17.86	16.60	10.28	16.85	27.13
Tocache	138	21.10	18.14	16.86	37.937		59.04	18.14	16.86	10.28	17.11	27.40
Tingo María	138	21.10	17.54	16.30	37.937		59.04	17.54	16.30	10.28	16.55	26.83
Huánuco	138	21.10	17.80	16.54	37.937		59.04	17.80	16.54	10.28	16.79	27.07
Paragsha II	138	21.10	17.75	16.58	37.937		59.04	17.75	16.58	10.28	16.81	27.09
Paragsha	220	21.10	17.71	16.53	37.937		59.04	17.71	16.53	10.28	16.76	27.05
Yaupi	138	21.10	17.42	16.29	37.937		59.04	17.42	16.29	10.28	16.51	26.80
Yuncan	138	21.10	17.55	16.40	37.937		59.04	17.55	16.40	10.28	16.63	26.91
Yuncan	220	21.10	17.60	16.44	37.937		59.04	17.60	16.44	10.28	16.67	26.95
Oroya Nueva	220	21.10	17.83	16.79	37.937		59.04	17.83	16.79	10.28	17.00	27.28
Oroya Nueva	138	21.10	17.72	16.63	37.937		59.04	17.72	16.63	10.28	16.85	27.13
Oroya Nueva	50	21.10	17.77	16.73	37.937		59.04	17.77	16.73	10.28	16.94	27.22
Carhuamayo	138	21.10	17.72	16.56	37.937		59.04	17.72	16.56	10.28	16.79	27.07
Carhuamayo Nueva	220	21.10	17.71	16.53	37.937		59.04	17.71	16.53	10.28	16.76	27.05
Cariparia	138	21.10	17.63	16.52	37.937		59.04	17.63	16.52	10.28	16.74	27.02
Desierto	220	21.10	18.21	17.15	37.937		59.04	18.21	17.15	10.28	17.36	27.64
Condorcocha	138	21.10	17.63	16.52	37.937		59.04	17.63	16.52	10.28	16.74	27.02
Condorcocha	44	21.10	17.63	16.52	37.937		59.04	17.63	16.52	10.28	16.74	27.02
Machupicchu	138	21.10	18.04	16.85	37.937		59.04	18.04	16.85	10.28	17.09	27.37
Cachimayo	138	21.10	18.58	17.31	37.937		59.04	18.58	17.31	10.28	17.56	27.84
Cusco	138	21.10	18.66	17.37	37.937		59.04	18.66	17.37	10.28	17.63	27.91
Combapata	138	21.10	18.96	17.65	37.937		59.04	18.96	17.65	10.28	17.91	28.19
Tintaya	138	21.10	19.21	17.95	37.937		59.04	19.21	17.95	10.28	18.20	28.48
Ayaviri	138	21.10	18.94	17.64	37.937		59.04	18.94	17.64	10.28	17.90	28.18
Azángaro	138	21.10	18.77	17.46	37.937		59.04	18.77	17.46	10.28	17.72	28.00
San Gaban	138	21.10	17.85	16.67	37.937		59.04	17.85	16.67	10.28	16.90	27.19
Mazuco	138	21.10	18.44	17.01	37.937		59.04	18.44	17.01	10.28	17.29	27.58
Puerto Maldonado	138	21.10	19.98	17.38	37.937		59.04	19.98	17.38	10.28	17.90	28.18
Juliaca	138	21.10	18.94	17.59	37.937		59.04	18.94	17.59	10.28	17.86	28.14
Puno	138	21.10	18.94	17.59	37.937		59.04	18.94	17.59	10.28	17.86	28.14
Puno	220	21.10	18.91	17.57	37.937		59.04	18.91	17.57	10.28	17.84	28.12
Callalli	138	21.10	18.98	17.75	37.937		59.04	18.98	17.75	10.28	17.99	28.28
Santuario	138	21.10	18.76	17.55	37.937		59.04	18.76	17.55	10.28	17.79	28.07
Arequipa	138	21.10	18.84	17.59	37.937		59.04	18.84	17.59	10.28	17.84	28.12
Socabaya	220	21.10	18.82	17.58	37.937		59.04	18.82	17.58	10.28	17.83	28.11
Cerro Verde	138	21.10	18.90	17.63	37.937		59.04	18.90	17.63	10.28	17.88	28.16
Repartición	138	21.10	19.02	17.68	37.937		59.04	19.02	17.68	10.28	17.95	28.23
Moliendo	138	21.10	19.13	17.76	37.937		59.04	19.13	17.76	10.28	18.03	28.31
Moquegua	220	21.10	18.82	17.55	37.937		59.04	18.82	17.55	10.28	17.80	28.08
Moquegua	138	21.10	18.84	17.57	37.937		59.04	18.84	17.57	10.28	17.82	28.10
Ilo ELS	138	21.10	19.01	17.70	37.937		59.04	19.01	17.70	10.28	17.96	28.24
Botiflaca	138	21.10	18.95	17.68	37.937		59.04	18.95	17.68	10.28	17.93	28.21
Toquepala	138	21.10	18.98	17.72	37.937		59.04	18.98	17.72	10.28	17.97	28.25
Aricota	138	21.10	18.85	17.69	37.937		59.04	18.85	17.69	10.28	17.92	28.20
Aricota	66	21.10	18.79	17.68	37.937	0.5437	59.04	19.33	18.22	10.28	18.44	28.72
Tacna (Los Héroes)	220	21.10	18.90	17.59	37.937		59.04	18.90	17.59	10.28	17.85	28.13
Tacna (Los Héroes)	66	21.10	18.97	17.62	37.937	0.5437	59.04	19.51	18.16	10.28	18.43	28.71
La Nina	220	21.10	18.76	17.46	37.937		59.04	18.76	17.46	10.28	17.72	28.00
Cotaruse	220	21.10	18.35	17.18	37.937		59.04	18.35	17.18	10.28	17.41	27.69
Carabayllo	220	21.10	18.35	17.19	37.937		59.04	18.35	17.19	10.28	17.42	27.70
La Ramada	220	21.10	18.27	17.06	37.937		59.04	18.27	17.06	10.28	17.30	27.58
Lomera	220	21.10	18.31	17.17	37.937		59.04	18.31	17.17	10.28	17.40	27.68
Asia	220	21.10	18.12	17.04	37.937		59.04	18.12	17.04	10.28	17.25	27.54
Alto Praderas	220	21.10	18.24	17.11	37.937		59.04	18.24	17.11	10.28	17.33	27.62
La Planicie	220	21.10	18.32	17.17	37.937		59.04	18.32	17.17	10.28	17.40	27.68
Belaunde	138	21.10	18.63	17.31	37.937		59.04	18.63	17.31	10.28	17.57	27.85
Caclic	220	21.10	18.54	17.25	37.937		59.04	18.54	17.25	10.28	17.51	27.79
Medio Mundo	220	21.10	18.18	17.07	37.937		59.04	18.18	17.07	10.28	17.29	27.57
Tintaya Nueva	220	21.10	19.18	17.91	37.937		59.04	19.18	17.91	10.28	18.16	28.44
Sistemas Aislados - Res. Barra (Cuadro 1) - Precios en Barra												
Adinelsa	MT	29.68	38.10	38.10			29.68	38.10	38.10	7.49	38.10	45.59
Chavimochic	MT	29.67	34.14	34.14			29.67	34.14	34.14	7.49	34.14	41.63
Edelnor	MT	29.67	34.14	34.14			29.67	34.14	34.14	7.49	34.14	41.63
Eilhicha	MT	29.67	34.14	34.14			29.67	34.14	34.14	7.49	34.14	41.63
Electro Oriente	MT	30.41	54.89	54.89			30.41	54.89	54.89	7.68	54.89	62.57
Electro Sur Este	MT											
Electro Puno	MT	29.67	49.67	49.67			29.67	49.67	49.67	7.49	49.67	57.16
Electro Ucayali	MT	30.57	64.06	64.06			30.57	64.06	64.06	7.72	64.06	71.78
Electronorte	MT											
Hidrandina	MT	29.67	34.14	34.14			29.67	34.14	34.14	7.49	34.14	41.63
Seal	MT	30.19	86.90	86.90			30.19	86.90	86.90	7.62	86.90	94.52
Sistemas Aislados - Res. Barra (Cuadro 10) - Precios Efectivos												
Adinelsa	MT	29.68	20.11	20.11			29.68	20.11	20.11	7.49	20.11	27.60
Chavimochic	MT	29.67	20.00	20.00			29.67	20.00	20.00	7.49	20.00	27.49
Edelnor	MT	29.67	20.00	20.00			29.67	20.00	20.00	7.49	20.00	27.49
Eilhicha	MT	29.67	17.55	17.55			29.67	17.55	17.55	7.49	17.55	25.04
Electro Oriente	MT	30.41	27.16	27.16			30.41	27.16	27.16	7.68	27.16	34.84
Electro Sur Este	MT											
Electro Puno	MT	29.67	15.49	15.49			29.67	15.49	15.49	7.49	15.49	22.98
Electro Ucayali	MT	30.57	27.31	27.31			30.57	27.31	27.31	7.72	27.31	35.03
Electronorte	MT											
Hidrandina	MT	29.67	20.00	20.00			29.67	20.00	20.00	7.49	20.00	27.49
Seal	MT	30.19	24.42	24.42			30.19	24.42	24.42	7.62	24.42	32.04

PRECIO A NIVEL DE GENERACIÓN

VALORES BASE DEL PNG (Resolución 082-2021-OS/CD)

FIJACIÓN AL 04/05/2021

	TENSIÓN kV	PPMo S/.kW-mes	PEMPo ctm. S/.kW.h	PEMFo ctm. S/.kW.h
Sistema Eléctrico Interconectado Nacional (SEIN) - Res. Barra (Cuadro 1)				
Zorritos	220	24.93	23.21	18.62
Talara	220	24.93	23.05	18.51
Piura Oeste	220	24.93	23.11	18.58
Chiclayo Oeste	220	24.93	22.87	18.43
Carhuaquero	220	24.93	22.50	18.17
Carhuaquero	138	24.93	22.50	18.17
Cutervo	138	24.93	22.73	18.29
Jaen	138	24.93	22.93	18.45
Guadalupe	220	24.93	22.86	18.42
Guadalupe	60	24.93	22.93	18.47
Cajamarca	220	24.93	22.48	18.15
Trujillo Norte	220	24.93	22.72	18.35
Chimbote 1	220	24.93	22.59	18.27
Chimbote 1	138	24.93	22.62	18.30
Paramonga Nueva	220	24.93	22.16	18.00
Paramonga Nueva	138	24.93	22.12	17.98
Paramonga Existente	138	24.93	22.02	17.93
Huacho	220	24.93	22.17	18.03
Zapallal	220	24.93	22.40	18.18
Ventanilla	220	24.93	22.44	18.22
Lima	220	24.93	22.42	18.20
Cantera	220	24.93	22.18	18.08
Chilca	220	24.93	22.05	17.95
Independencia	220	24.93	22.22	18.14
Ica	220	24.93	22.28	18.18
Marcona	220	24.93	22.43	18.20
Mantaro	220	24.93	21.64	17.62
Huayucachi	220	24.93	21.70	17.74
Pachachaca	220	24.93	21.89	17.84
Pomacocha	220	24.93	21.93	17.86
Huancavelica	220	24.93	21.82	17.77
Callahuanca	220	24.93	22.10	17.98
Cajamarquilla	220	24.93	22.35	18.16
Huallanca	138	24.93	21.97	17.78
Vizcarra	220	24.93	21.81	17.63
Tingo María	220	24.93	21.43	17.26
Aguaytía	220	24.93	21.25	17.09
Aguaytía	138	24.93	21.31	17.12
Aquaytía	22.9	24.93	21.28	17.11
Pucallpa	138	24.93	21.92	17.49
Pucallpa	60	24.93	21.94	17.50
Aucayacu	138	24.93	21.77	17.51
Tocache	138	24.93	22.11	17.79
Tingo María	138	24.93	21.38	17.20
Huánuco	138	24.93	21.69	17.45
Paragsha II	138	24.93	21.63	17.49
Paragsha	220	24.93	21.58	17.44
Yaupi	138	24.93	21.23	17.18
Yuncan	138	24.93	21.38	17.30
Yuncan	220	24.93	21.45	17.34
Oroya Nueva	220	24.93	21.73	17.74
Oroya Nueva	138	24.93	21.60	17.56
Oroya Nueva	50	24.93	21.66	17.67
Carhuamayo	138	24.93	21.59	17.47
Carhuamayo Nueva	220	24.93	21.58	17.44
Caripa	138	24.93	21.49	17.44
Desierto	220	24.93	22.20	18.12
Condorcocha	138	24.93	21.49	17.44
Condorcocha	44	24.93	21.49	17.44
Machupicchu	138	24.93	21.99	17.80
Cachimayo	138	24.93	22.66	18.28
Cusco	138	24.93	22.75	18.34
Combapata	138	24.93	23.12	18.65
Tintaya	138	24.93	23.42	18.95
Ayaviri	138	24.93	23.09	18.63
Azángaro	138	24.93	22.89	18.44
San Gaban	138	24.93	21.76	17.60
Mazuco	138	24.93	22.49	17.96
Puerto Maldonado	138	24.93	24.36	18.35
Juliaca	138	24.93	23.09	18.57
Puno	138	24.93	23.10	18.58
Puno	220	24.93	23.05	18.56
Callalli	138	24.93	23.14	18.75
Santuario	138	24.93	22.87	18.53
Arequipa	138	24.93	22.97	18.58
Socabaya	220	24.93	22.95	18.56
Cerro Verde	138	24.93	23.05	18.62
Repartición	138	24.93	23.19	18.67
Mollendo	138	24.93	23.33	18.75
Moquegua	220	24.93	22.95	18.54
Moquegua	138	24.93	22.97	18.56
Ilo ELS	138	24.93	23.18	18.69
Botiflaca	138	24.93	23.10	18.67
Toquepala	138	24.93	23.15	18.71
Aricota	138	24.93	22.98	18.68
Aricota	66	24.93	22.90	18.67
Tacna (Los Héroes)	220	24.93	23.04	18.58
Tacna (Los Héroes)	66	24.93	23.13	18.61
La Nina	220	24.93	22.85	18.43
Cotaruse	220	24.93	22.37	18.14
Carabayllo	220	24.93	22.37	18.15
La Ramada	220	24.93	22.27	18.01
Lomera	220	24.93	22.33	18.13
Asia	220	24.93	22.10	18.00
Alto Praderas	220	24.93	22.24	18.07
La Planicie	220	24.93	22.34	18.13
Belaunde	138	24.93	22.70	18.26
Cadic	220	24.93	22.59	18.21
Medio Mundo	220	24.93	22.16	18.02
Tintaya Nueva	220	24.93	23.38	18.92

ACTUALIZADO AL 04/Junio/2021 CON REDONDEO

	TENSIÓN kV	PPM S/.kW-mes	PEMP ctm. S/.kW.h	PEMF ctm. S/.kW.h	PCSPT S/.kW-mes	CPSEE ctm. S/.kW.h	(PPM+PCSPT) S/.kW-mes	(PEMP + CPSEE) ctm. S/.kW.h	(PEMF + CPSEE) ctm. S/.kW.h	Potencia ctm. S/.kW.h	Energía ctm. S/.kW.h	Promedio ctm. S/.kW.h
Sistema Eléctrico Interconectado Nacional (SEIN) - Res. Barra (Cuadro 1)												
Zorritos	220	24.93	23.21	18.62	37.937		62.867	23.21	18.62	10.95	19.53	30.48
Talara	220	24.93	23.05	18.51	37.937		62.867	23.05	18.51	10.95	19.41	30.36
Piura Oeste	220	24.93	23.11	18.58	37.937		62.867	23.11	18.58	10.95	19.48	30.43
Chiclayo Oeste	220	24.93	22.87	18.43	37.937		62.867	22.87	18.43	10.95	19.31	30.26
Carhuaquero	220	24.93	22.50	18.17	37.937		62.867	22.50	18.17	10.95	19.03	29.98
Carhuaquero	138	24.93	22.50	18.17	37.937		62.867	22.50	18.17	10.95	19.03	29.98
Cutervo	138	24.93	22.73	18.29	37.937		62.867	22.73	18.29	10.95	19.17	30.12
Jaen	138	24.93	22.93	18.45	37.937		62.867	22.93	18.45	10.95	19.34	30.29
Guadalupe	220	24.93	22.86	18.42	37.937		62.867	22.86	18.42	10.95	19.30	30.25
Guadalupe	60	24.93	22.93	18.47	37.937		62.867	22.93	18.47	10.95	19.36	30.31
Cajamarca	220	24.93	22.48	18.15	37.937		62.867	22.48	18.15	10.95	19.01	29.96
Trujillo Norte	220	24.93	22.72	18.35	37.937		62.867	22.72	18.35	10.95	19.22	30.17
Chimbote 1	220	24.93	22.59	18.27	37.937		62.867	22.59	18.27	10.95	19.13	30.08
Chimbote 1	138	24.93	22.62	18.30	37.937		62.867	22.62	18.30	10.95	19.16	30.11
Paramonga Nueva	220	24.93	22.16	18.00	37.937		62.867	22.16	18.00	10.95	18.83	29.78
Paramonga Nueva	138	24.93	22.12	17.98	37.937		62.867	22.12	17.98	10.95	18.80	29.75
Paramonga Existente	138	24.93	22.02	17.93	37.937		62.867	22.02	17.93	10.95	18.74	29.69
Huacho	220	24.93	22.17	18.03	37.937		62.867	22.17	18.03	10.95	18.85	29.80
Zapallal	220	24.93	22.40	18.18	37.937		62.867	22.40	18.18	10.95	19.02	29.97
Ventanilla	220	24.93	22.44	18.22	37.937		62.867	22.44	18.22	10.95	19.06	30.01
Lima	220	24.93	22.42	18.20	37.937		62.867	22.42	18.20	10.95	19.04	29.99
Cantera	220	24.93	22.18	18.08	37.937		62.867	22.18	18.08	10.95	18.90	29.84
Chilca	220	24.93	22.05	17.95	37.937		62.867	22.05	17.95	10.95	18.77	29.71
Independencia	220	24.93	22.22	18.14	37.937		62.867	22.22	18.14	10.95	18.95	29.90
Ica	220	24.93	22.28	18.18	37.937		62.867	22.28	18.18	10.95	19.00	29.94
Marcona	220	24.93	22.43	18.20	37.937		62.867	22.43	18.20	10.95	19.04	29.99
Mantaro	220	24.93	21.64	17.62	37.937		62.867	21.64	17.62	10.95	18.42	29.37
Huayucachi	220	24.93	21.70	17.74	37.937		62.867	21.70	17.74	10.95	18.53	29.48
Pachachaca	220	24.93	21.89	17.84	37.937		62.867	21.89	17.84	10.95	18.65	29.59
Pomacocha	220	24.93	21.93	17.86	37.937		62.867	21.93	17.86	10.95	18.67	29.62
Huancavelica	220	24.93	21.82	17.77	37.937		62.867	21.82	17.77	10.95	18.58	29.52
Callahuanca	220	24.93	22.10	17.98	37.937		62.867	22.10	17.98	10.95	18.80	29.75
Cajamarquilla	220	24.93	22.35	18.16	37.937		62.867	22.35	18.16	10.95	18.99	29.94
Huallanca	138	24.93	21.97	17.78	37.937		62.867	21.97	17.78	10.95	18.61	29.56
Vizcarra	220	24.93	21.81	17.63	37.937		62.867	21.81	17.63	10.95	18.46	29.41
Tingo María	220	24.93	21.43	17.26	37.937		62.867	21.43	17.26	10.95	18.09	29.04
Aguaytía	220	24.93	21.25	17.09	37.937		62.867	21.25	17.09	10.95	17.92	28.87
Aguaytía	138	24.93	21.31	17.12	37.937		62.867	21.31	17.12	10.95	17.95	28.90
Aquaytía	22.9	24.93	21.28	17.11	37.937		62.867	21.28	17.11	10.95	17.94	28.89
Pucallpa	138	24.93	21.92	17.49	37.937		62.867	21.92	17.49	10.95	18.37	29.32
Pucallpa	60	24.93	21.94	17.50	37.937	1.8443	62.867	23.78	19.34	10.95	20.23	31.18
Aucayacu	138	24.93	21.77	17.51	37.937		62.867	21.77	17.51	10.95	18.36	29.31
Tocache	138	24.93	22.11	17.79	37.937		62.867	22.11	17.79	10.95	18.65	29.60
Tingo María	138	24.93	21.38	17.20	37.937		62.867	21.38	17.20	10.95	18.03	28.98
Huánuco	138	24.93	21.69	17.45	37.937		62.867	21.69	17.45	10.95	18.29	29.24
Paragsha II	138	24.93	21.63	17.49	37.937		62.867	21.63	17.49	10.95	18.31	29.26
Paragsha	220	24.93	21.58	17.44	37.937		62.867	21.58	17.44	10.95	18.26	29.21
Yaupi	138	24.93	21.23	17.18	37.937		62.867	21.23	17.18	10.95	17.99	28.93
Yuncan	138	24.93	21.38	17.30	37.937		62.867	21.38	17.30	10.95	18.11	29.06
Yuncan	220	24.93	21.45	17.34	37.937		62.867	21.45	17.34	10.95	18.16	29.11
Oroya Nueva	220	24.93	21.73	17.74	37.937		62.867	21.73	17.74	10.95	18.53	29.48
Oroya Nueva	138	24.93	21.60	17.56	37.937		62.867	21.60	17.56	10.95	18.36	29.31
Oroya Nueva	50	24.93	21.66	17.67	37.937		62.867	21.66	17.67	10.95	18.46	29.41
Carhuamayo	138	24.93	21.59	17.47	37.937		62.867	21.59	17.47	10.95	18.29	29.24
Carhuamayo Nueva	220	24.93	21.58	17.44	37.937		62.867	21.58	17.44	10.95	18.26	29.21
Caripa	138	24.93	21.49	17.44	37.937		62.867	21.49	17.44	10.95	18.25	29.19
Desierto	220	24.93	22.20	18.12	37.937		62.867	22.20	18.12	10.95	18.93	29.88
Condorcocha	138	24.93	21.49	17.44	37.937		62.867	21.49	17.44	10.95	18.25	29.19
Condorcocha	44	24.93	21.49	17.44	37.937		62.867	21.49	17.44	10.95	18.25	29.19
Machupicchu	138	24.93	21.99	17.80	37.937		62.867	21.99	17.80	10.95	18.63	29.58
Cachimayo	138	24.93	22.66	18.28	37.937		62.867	22.66	18.28	10.95	19.15	30.10
Cusco	138	24.93	22.75	18.34	37.937		62.867	22.75	18.34	10.95	19.22	30.17
Combapata	138	24.93	23.12	18.65	37.937		62.867	23.12	18.65	10.95	19.54	30.49
Tintaya	138	24.93	23.42	18.95	37.937		62.867	23.42	18.95	10.95	19.84	30.79
Ayaviri	138	24.93	23.09	18.63	37.937		62.867	23.09	18.63	10.95	19.52	30.47
Azángaro	138	24.93	22.89	18.44	37.937		62.867	22.89	18.44	10.95	19.33	30.27
San Gaban	138	24.93	21.76	17.60	37.937		62.867	21.76	17.60	10.95	18.43	29.38
Mazuco	138	24.93	22.49	17.96	37.937		62.867	22.49	17.96	10.95	18.86	29.81
Puerto Maldonado	138	24.93	24.36	18.35	37.937		62.867	24.36	18.35	10.95	19.55	30.49
Juliaca	138	24.93	23.09	18.57	37.937		62.867	23.09	18.57	10.95	19.47	30.42
Puno	138	24.93	23.10	18.58	37.937		62.867	23.10	18.58	10.95	19.48	30.43
Puno	220	24.93	23.05	18.56	37.937		62.867	23.05	18.56	10.95	19.45	30.40
Callalli	138	24.93	23.14	18.75	37.937		62.867	23.14	18.75	10.95	19.62	30.57
Santuario	138	24.93	22.87	18.53	37.937		62.867	22.87	18.53	10.95	19.39	30.34
Arequipa	138	24.93	22.97	18.58	37.937		62.867	22.97	18.58	10.95	19.45	30.40
Socabaya	220	24.93	22.95	18.56	37.937		62.867	22.95	18.56	10.95	19.43	30.38
Cerro Verde	138	24.93	23.05	18.62	37.937		62.867	23.05	18.62	10.95	19.50	30.45
Repartición	138	24.93	23.19	18.67	37.937		62.867	23.19	18.67	10.95	19.57	30.52
Mollendo	138	24.93	23.33	18.75	37.937		62.867	23.33	18.75	10.95	19.66	30.61
Moquegua	220	24.93	22.95	18.54	37.937		62.867	22.95	18.54	10.95	19.42	30.37
Moquegua	138	24.93	22.97	18.56	37.937		62.867	22.97	18.56	10.95	19.44	30.39
Ilo ELS	138	24.93	23.18	18.69	37.937		62.867	23.18	18.69	10.95	19.58	30.53
Botiflaca	138	24.93	23.10	18.67	37.937		62.867	23.10	18.67	10.95	19.55	30.50
Toquepala	138	24.93	23.15	18.71	37.937		62.867	23.15	18.71	10.95	19.59	30.54
Aricota	138	24.93	22.98	18.68	37.937		62.867	22.98	18.68	10.95	19.54	30.48
Aricota	66	24.93	22.90	18.67	37.937	0.5437	62.867	22.90	18.67	10.95	19.51	30.46
Tacna (Los Héroes)	220	24.93	23.04	18.58	37.937		62.867	23.04	18.58	10.95	19.47	30.42
Tacna (Los Héroes)	66	24.93	23.13	18.61	37.937	0.5437	62.867	23.13	18.61	10.95	19.51	30.46
La Nina	220	24.93	22.85	18.43	37.937		62.867	22.85	18.43	10.95	19.31	30.26
Cotaruse	220	24.93	22.37	18.14	37.937		62.867	22.37	18.14	10.95	18.98	29.93
Carabayllo	220	24.93	22.37	18.15	37.937		62.867	22.37	18.15	10.95	18.99	29.94
La Ramada	220	24.93	22.27	18.01	37.937		62.867	22.27	18.01	10.95	18.86	29.81
Lomera	220	24.93	22.33	18.13	37.937		62.867	22.33	18.13	10.95	18.97	29.91
Asia	220	24.93	22.10	18.00	37.937		62.867	22.10	18.00	10.95	18.82	29.76
Alto Praderas	220	24.93	22.24	18.07	37.937		62.867	22.24	18.07	10.95	18.90	29.85
La Planicie	220	24.93	22.34	18.13	37.937		62.867	22.34	18.13	10.95	18.97	29.92
Belaunde	138	24.93	22.70	18.26	37.937		62.867	22.70	18.26	10.95	19.14	30.09
Cadic	220	24.93	22.59	18.21	37.937		62.867	22.59	18.21	10.95	19.08	30.03
Medio Mundo	220	24.93	22.16	18.02	37.937		62.867	22.16	18.02	10.95	18.84	29.79
Tintaya Nueva	220	24.93	23.38	18.92	37.937		62.867	23.38	18.92	10.95	19.81	30.76

PEAJES DE CONEXIÓN AL SISTEMA PRINCIPAL DE TRANSMISIÓN (PCSPT)
VALORES BASE DE LOS PEAJES (Res. 067-2021-OS/CD y 143-2021-OS/CD)

Actualizado al 04/Junio/2021 con redondeo

Sistema de Transmisión		PCSPT + PTSGT (S/./kW-mes)		
		Valor Base (Res. Barra)	FAPCSPT	Actualizado
SPT de REP		3.243	1.0000	3.243
SPT de Egemsa		0.003	1.0000	0.003
SPT de San Gabán		0.004	1.0000	0.004
SPT de Antamina		0.006	1.0000	0.006
SPT de Eteselva		0.134	1.0000	0.134
SPT de Redesur		0.722	1.0000	0.722
SPT de Redesur (Adenda 8)		0.000	1.0000	0.000
SPT de Transmantaro (Contrato BOOT, Addendum N° 5 y Addendum N° 10)		2.026	1.0000	2.026
SPT de Transmantaro (Addendum N° 8)		0.631	1.0000	0.631
SPT de Transmantaro (Ampliacion Adicional 1)		0.045	1.0000	0.045
SPT de ISA (contrato BOOT, ampliación 1 y 2)		0.541	1.0000	0.541
SGT Línea Chilca -Zapallal (Tramos 1 y 2)		0.528	1.0000	0.528
SGT Líneas Carhuamayo - Cajamarca 220 kV (Tramos 1, 2, 3 y4) y SVC-Cajamarca	LT 220 kV Carhuamayo-Paragsha y subestaciones asociadas –	0.083	1.0000	0.083
	L.T. Paragsha-Conococha y subestaciones asociadas – Tramo 2	0.114	1.0000	0.114
	Ampliación de la Subestación Cajamarca 220 kV – SVC	0.094	1.0000	0.094
	LT 220 kV Conococha-Huallanca y subestaciones asociadas –	0.214	1.0000	0.214
	LT 220 kV Huallanca-Cajamarca y subestaciones asociadas -	0.391	1.0000	0.391
SGT Línea Talara Piura 220 kV (2do circuito)		0.116	1.0000	0.116
SGT Línea Zapallal – Trujillo 500 kV		1.321	1.0000	1.321
SGT Línea Pomacocha - Carhuamayo 220 kV		0.120	1.0000	0.120
SGT Línea Socabaya - Tintaya 220 kV		0.328	1.0000	0.328
SGT Linea Chilca – Marcona –Montalvo 500 kV		2.417	1.0000	2.417
SGT Línea Carhuaquero- Cajamarca Norte- Cáclic- Moyobamba 220 kV (1)		0.830	1.0000	0.830
SGT Línea Machupicchu–Quencoro–Onocora–Tintaya 220 kV (1)		0.733	0.0000	0.000
SGT Linea Trujillo - Chiclayo 500 KV		0.790	1.0000	0.790
SGT Linea Machupicchu - Abancay - Cotaruse 220 kV (1)		0.580	1.0000	0.580
SGT Linea 500 kV Mantaro- Marcona-Socabaya-Montalvo y Subestaciones Asociadas (1)		2.055	1.0000	2.055
Subestacion Carapongo y enlaces de conexión (1er etapa)		0.312	1.0000	0.312
Refuerzo de Linea Trujillo - Chiclayo		0.043	1.0000	0.043
Subestacion Carapongo (Monto Complementario)		0.004	1.0000	0.004
Linea Aguaytia - Pucallpa (2 circuito)		0.066	0.0000	0.000
Linea Nueva Yanango - Nueva Huanuco 500 kV		0.848	0.0000	0.000
Linea Mantaro - Nueva Yanango - Carapongo 500 kV		1.036	0.0000	0.000
Linea Azangaro-Juliaca-Puno 220 kV		0.277	1.0000	0.277
Cargo Unitario por Compensación por Seguridad de Suministro (3)	No RF	0.287	1.0000	0.287
	RF de Talara	0.903	1.0000	0.903
	RF de Ilo	1.928	1.0000	1.928
	RF de Pucallpa	0.214	1.0000	0.214
	RF de Puerto Maldonado	0.123	1.0000	0.123
	RF de Puerto Eten	1.023	1.0000	1.023
Cargo por Prima	Cogeneración Paramonga	0.205	1.0000	0.205
	C.H. Santa Cruz II	0.082	1.0000	0.082
	C.H. Santa Cruz I	0.075	1.0000	0.075
	C.H. Poechos 2	0.127	1.0000	0.127
	C.H. Roncador	0.041	1.0000	0.041
	C.H. Carhuaquero IV	0.232	1.0000	0.232
	C.H. Caña Brava	0.063	1.0000	0.063
	C.H. La Joya	0.145	1.0000	0.145
	C.T. Huaycoloro	0.149	1.0000	0.149
	C. H. Purmacana	0.000	0.0000	0.000
	C.H. Huasahuasi I	0.108	1.0000	0.108
	C.H. Huasahuasi II	0.105	1.0000	0.105
	C.H. Nuevo Imperial	0.054	1.0000	0.054
	CS Repartición Solar 20T	0.417	1.0000	0.417
	CS Majes Solar 20T	0.418	1.0000	0.418
	CS Tacna Solar 20T	0.529	1.0000	0.529
	CS Panamericana Solar 20T	0.543	1.0000	0.543
	C.H. Yanapampa	0.054	1.0000	0.054
	C.H. Las Pizarras	0.236	1.0000	0.236
	C.E Marcona	0.370	1.0000	0.370
	C.E. Talara	0.433	1.0000	0.433
	C.E. Cupisnique	1.042	1.0000	1.042
	C.H. Runatullo III	0.234	1.0000	0.234
	C.H. Runatullo II	0.183	1.0000	0.183
	CSF Moquegua FV	0.242	1.0000	0.242
	C.H. Canchayllo	0.035	1.0000	0.035
	C.T. La Gringa V	0.066	1.0000	0.066
	C.H. Chancay	0.308	1.0000	0.308
	C.H. Rucuy	0.099	1.0000	0.099
	C.E. Tres Hermanas	1.020	1.0000	1.020
	C.H. Potrero	0.183	1.0000	0.183
	C.H. Yarucaya	0.221	1.0000	0.221
	C.S. Rubi	0.715	1.0000	0.715
	C.H. Renovandes H1	0.279	1.0000	0.279
	C.S. Intipampa	0.190	1.0000	0.190
	C.E. Wayra I	0.500	1.0000	0.500
	C.B. Huaycoloro II	0.039	1.0000	0.039
	C.H. Angel I	0.105	1.0000	0.105
	C.H. Angel II	0.153	1.0000	0.153
	C.H. Angel III	0.127	1.0000	0.127
	C.H. Her	0.008	1.0000	0.008
	C.H. Carhuac	0.150	1.0000	0.150
	C.H. El Carmen	0.097	1.0000	0.097
	C.H. Zaña 1	0.000	0.0000	0.000
	C.H. Manta	0.121	1.0000	0.121
	C.T. Callao	0.074	1.0000	0.074
	C.H. 8 de Agosto	0.158	1.0000	0.158
Cargo Unitario por FISE (3)		0.482	1.0000	0.482
Cargo Unitario por Capacidad de Generación Eléctrica - CT Puerto Bravo (8)		2.3210	1.0000	2.321
Cargo Unitario por Capacidad de Generación Eléctrica - CT Planta N° 2 Ilo (8)		1.9290	1.0000	1.929
Cargo Unitario por Compensación de la Confiabilidad en la Cadena de Suministro de Energía (4)		0.0200	1.0000	0.020
			PCSPT =	***37.937***

Factores de Expansión de Pérdidas Medias Media Tension (Potencia y Energía)

Factores de Pérdidas en los Sistemas Secundarios de Transmisión por Áreas de Demanda según nivel de Tensión

Factor de Expansión de Pérdidas
(Establecido en la Resolución de Peajes Secundarios)

	FPMdP				FPMdE			
Área de Demanda	MAT	MAT/AT	AT	AT/MT	MAT	MAT/AT	AT	AT/MT
1	1.0004	1.0032	1.0131	1.0035	1.0004	1.0040	1.0131	1.0040
2	1.0000	1.0031	1.0113	1.0051	1.0000	1.0032	1.0103	1.0055
3	1.0023	1.0020	1.0109	1.0042	1.0021	1.0020	1.0091	1.0050
4	1.0139	1.0023	1.0084	1.0053	1.0118	1.0027	1.0077	1.0064
5	1.0009	1.0034	1.0297	1.0049	1.0007	1.0032	1.0230	1.0060
6	1.0020	1.0040	1.0059	1.0057	1.0017	1.0041	1.0048	1.0061
7	1.0006	1.0072	1.0046	1.0054	1.0007	1.0079	1.0044	1.0059
8	1.0013	1.0030	1.0233	1.0040	1.0007	1.0033	1.0159	1.0041
9	1.0035	1.0021	1.0085	1.0026	1.0025	1.0024	1.0071	1.0033
10	1.0021	1.0025	1.0094	1.0032	1.0047	1.0031	1.0124	1.0040
11	1.0004	1.0031	1.0130	1.0040	1.0007	1.0037	1.0192	1.0050
12	1.0036	1.0000	1.0000	1.0051	1.0027	1.0000	1.0000	1.0061
13	1.0000	1.0000	1.0100	1.0102	1.0000	1.0000	1.0095	1.0072
14	1.0000	1.0000	1.0037	1.0037	1.0000	1.0000	1.0031	1.0041

Factor de expansión de Pérdidas aplicable para expandir hasta MT
(acumulados calculados) (1/)

	FPMdP			FPMdE		
Área de Demanda	Desde MAT	Desde AT (1/)	Desde MT	Desde MAT	Desde AT (1/)	Desde MT
1	1.0203	1.0166	1.0000	1.0216	1.0172	1.0000
2	1.0196	1.0165	1.0000	1.0191	1.0159	1.0000
3	1.0195	1.0151	1.0000	1.0183	1.0141	1.0000
4	1.0302	1.0137	1.0000	1.0289	1.0141	1.0000
5	1.0392	1.0347	1.0000	1.0332	1.0291	1.0000
6	1.0177	1.0116	1.0000	1.0168	1.0109	1.0000
7	1.0179	1.0100	1.0000	1.0190	1.0103	1.0000
8	1.0318	1.0274	1.0000	1.0241	1.0201	1.0000
9	1.0168	1.0111	1.0000	1.0154	1.0104	1.0000
10	1.0173	1.0126	1.0000	1.0244	1.0164	1.0000
11	1.0206	1.0171	1.0000	1.0288	1.0243	1.0000
12	1.0087	1.0051	1.0000	1.0088	1.0061	1.0000
13	1.0203	1.0203	1.0000	1.0168	1.0168	1.0000
14	1.0074	1.0074	1.0000	1.0072	1.0072	1.0000