

National Electric Power Regulatory Authority Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad Ph: +92-51-9206500, Fax: +92-51-2600025 Web: www.nepra.org.pk. E-mail: registrar@nepra.org.pk

> No. NEPRA/TRF-310/APPL-2015/6312-6314 May 9, 2016

Subject: Decision of the National Electric Power Regulatory Authority in the Matter of Application for Unconditional Acceptance of Upfront Tariff for Small Hydro Power Projects filed by Alka Power Private Limited (APPL) for its 1.8 MW Hydropower Project at RD 69, Jhang Branch Canal, Punjab

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annex-I and Annex-II (15 pages) in Case No. NEPRA/TRF-310/APPL-2015.

- 2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).
- 3. The Order at paragraph 6 of the Decision needs to be notified in the official Gazette.

Enclosure: As above

(Syed Safeer Hussain)

Secretary
Ministry of Water & Power
'A' Block, Pak Secretariat
Islamabad

CC:

- 1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
- 2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.



DECISION OF THE NATIONAL ELECTRIC POWER REGULATORY AUTHORITY IN THE MATTER OF APPLICATION FOR UNCONDITIONAL ACCEPTANCE OF UPFRONT TARIFF FOR SMALL HYDRO POWER PROJECTS FILED BY ALKA POWER PRIVATE LIMITED (APPL) FOR ITS 1.8 MW HYDROPOWER PROJECT AT RD 69, JHANG BRANCH CANAL, PUNJAB.

- 1. The National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") vide its determination dated April 02, 2015 had approved Upfront Tariff for Small Hydro Power Generation Projects up to 25 MW Installed Capacity (hereinafter referred to as the "upfront tariff"), which was reviewed through the Authority's subsequent decision in the matter of Motions for Leave for Review filed by Riali Hydro Power Company (Pvt.) Limited (RHPCL) and Kathai-II Hydro (Pvt.) Limited (KHL) dated October 14, 2015.
- 2. Alka Power (Private) Limited (hereinafter referred to as "APPL" or the "applicant" or the "company") on September 07, 2015 submitted an application for unconditional acceptance of the upfront tariff for its proposed hydropower project of 1.80 MW installed capacity to be located at RD 69, Jhang Branch Canal, Punjab (hereinafter referred to as the "project"). APPL has already been granted Generation License No. IGSPL/27/2010 dated October 13, 2010 for its project.
- 3. The said application was scrutinized and found to be in compliance with the Terms and Conditions stipulated in the aforementioned decisions of the Authority and the requirements prescribed in the National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011. The Authority noted that the Punjab Power Development Board (PPDB) vide letter dated September 02, 2015 recommended the applicant for grant of upfront tariff. Moreover, the certificate of panel of experts of PPDB regarding net annual plant factor of the project has been provided. As per the certificate of the panel of experts, the project has a net head of 2.9 meters and is expected to deliver a net annual energy of 11.88 GWh to the grid at 76.1% plant factor. The applicant has certified that the net annual plant factor of the project, as certified by the panel of experts of PPDB, is based on detailed design. However, the Authority has observed that the certificate provided by the panel of experts is based on proposed installed capacity based on feasibility study. In view of the aforementioned, the applicant is directed to seek onetime adjustment based on







revised net annual plant factor as per finalized detailed project design, within 15 days of commercial operations date of the project, accompanied by the panel of experts' revised certificate regarding annual plant factor. The applicant has certified that all plant and machinery to be installed will be brand new and the project is a green field hydro power project. Further the applicant has opted to bear hydrological risk. Furthermore, the applicant has certified that it has not already executed a power purchase agreement or achieved financial close for the said project. The applicant has sought upfront tariff based on 100% local loan.

- 4. The PPDB vide letter dated 02.09.2015 has informed that the applicant is holding a valid LOI bearing No. MD-PPDB/H-14/482/2007 dated November 28, 2007. The Authority furthermore noted that Gujranwala Electric Power Company Limited (GEPCO) vide its memo no. 67930-3 dated October 10, 2009 and memo no. 72399 dated October 31, 2009 has conveyed that interconnection of the project is feasible and that it has no objection to purchase of power from the project, subject to the condition that the tariff is determined by NEPRA and connectivity cost is borne by power producer as per terms and conditions of GOP. It is hereby clarified that under the relevant policies, the option to bear the construction cost of interconnection is the prerogative of the Power Producer and not the Power Purchaser. The Authority hereby directs the Power Purchaser (i.e. either the CPPA-G or the DISCO) to ensure timely completion of interconnection facilities. The Power Purchaser is directed to follow NEPRA (Sale of Electric Power by Renewable Energy Companies) Guidelines, 2015 (SRO 53(I)/2015 dated 23 January 2015) in this respect. Further in this regard, the Authority has decided that any penalties/liquidated damages/non-project missed volumes, etc. by whatever name called, payable by the power purchaser on account of its default in providing the interconnection facilities on the committed date, will not be allowed by the Authority to the power purchaser as a part of its tariff.
- 5. Considering the application along with other relevant information, documents and facts highlighted above, the Authority has decided to grant upfront tariff to APPL. The Authority hereby directs that the Energy/Power Purchase Agreement, agreed between APPL and the power purchaser, shall be submitted to the Authority for review.







6. ORDER

Pursuant to section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 read with Rule 6 of the National Electric Power Regulatory Authority Licensing (Generation) Rules, 2000 and Regulation 4 (7) of the National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011, Alka Power (Private) Limited (the "applicant" or "company") is allowed to charge the following specified/approved tariff for electricity delivered to the power purchaser from its hydropower project:

REFERENCE TARIFF ON BOOT BASIS

	With 100% local debt				
	Years 1 to 10	Years 11 to 30 (Rs. /kWh)			
	(Rs. /kWh)				
Energy Charge					
Variable O & M					
- Local	0.1110	0.1110			
- Foreign	0.1110	0.1110			
Capacity Charge					
Fixed O & M					
- Local	0.5324	0.5324			
- Foreign	0.1331	0.1331			
Insurance	0.6697	0.6697			
Return on equity	4.4318	4.5188			
Debt servicing	7.8397	-			
Total tariff	13.8286	6.0759			

Levelised tariff	
- Rs. /kWh	11.1292
- US cents/kwh.	10.9163

The reference component wise Upfront Tariff table is attached herewith as Annex - I. The reference Debt Service schedule is attached herewith as Annex - II.





Summary of indexations which may be applied on various tariff components is as follows:

	<u>Indexation</u>			
Variable O & M				
- Local	CPI (General)			
- Foreign	US CPI and PKR/US\$			
Fixed O & M				
- Local	CPI (General)			
- Foreign	US CPI and PKR/US\$			
Insurance	PKR/US \$ (if applicable)			
Return on equity	PKR/US \$			
Debt servicing	Local debt			
- Principal	-			
- Interest	3 months KIBOR			

i) <u>Hydrological risk</u>

The hydrological risk will be borne by the project sponsor. The power producer is allowed to sell all its power at the prevailing tariff.

ii) Adjustment on account of savings in cost of debt

The above tariff has been worked out on the basis of 3 months KIBOR of 6.73% plus a premium of 350 basis points. In case the spread negotiated is less than the said limits, the savings in the premium over KIBOR shall be shared by the power purchaser and the power producer in the ratio of 60: 40 respectively. The power producer shall submit relevant authentic documentary evidence to the Authority, for the aforesaid adjustment within 15 days of commercial operations date of the project. In case the premium on KIBOR is higher than that mentioned above, no adjustment on the basis of actual higher premium will be allowed.





The interest during construction assumed for the purpose of tariff calculations is US\$ 0.502 Million per MW. The interest during construction will be reassessed at commercial operations date of the project with actual KIBOR and spread as detailed above.

iii) Adjustment on account of Sinosure fees

Since the project is 100% locally financed, adjustment in project cost on account of Sinosure or other export credit insurance fees is not applicable in this case.

iv) Adjustment on account of actual plant factor

The above tariff has been adjusted based on 76.1% plant factor of the project.

The upfront tariff has been opted without finalization of detailed project design, therefore the power producer shall submit request for onetime adjustment, within 15 days of the commercial operations date of the project, accompanied by the revised panel of experts certificate regarding net annual plant factor, on the basis of detailed project design. Other terms and conditions of the upfront tariff, including for installed capacity and net annual plant factor will remain applicable.

v) Adjustment for loan structure

The above tariff has been allowed on the basis of loan structure proposed by the company, i.e. 100% local debt. The tariff will not be subject to any further change, regardless of any subsequent change(s) in the financing structure, etc., except for the adjustment in accordance with the onetime adjustment mechanism detailed herein, where applicable, and the application of relevant indexations/adjustment as detailed in this order.

vi) Pass-Through Items

If the company is obligated to pay any tax on its income from generation of electricity from small hydro, or water use charges/IRSA charges/other such





levies or charges, not being of refundable nature, are payable by the company for generation of electricity from small hydro or any duties and/or taxes, not being of refundable nature, are imposed on the company upto the commencement of its commercial operations for import of its plant, machinery and equipment, the exact amount paid by the company on these accounts shall be reimbursed by the power purchaser on production of original receipts. This payment should be considered as a pass-through payment spread over a twelve months period. The payment on account of water use charges shall be spread equally over 12 months for each year. Furthermore, in such a scenario, the company shall also submit to the power purchaser details of any tax/levies/charges savings and the power purchaser shall deduct the amount of these savings from its payment to the company on account of taxation.

The adjustment for duties and/or taxes will be restricted only to the extent of duties and/or taxes directly imposed on the company. No adjustment for duties and/or taxes imposed on third parties such as contractors, suppliers, consultants, etc., will be allowed. Further, withholding tax on dividend will also not be allowed as a pass through item.

vii) Onetime adjustment of Tariff after COD

Total EPC costs of US\$ 3.211 Million / MW will be assumed for the purpose of Onetime adjustment of Tariff.

40% of the assumed EPC cost will be adjusted over 36 months (maximum) starting from the date of financial close of the project for USD/PKR exchange rate variation.

60% of the assumed EPC cost converted at reference USD/PKR exchange rate of 101.95 will be adjusted over 36 months (maximum) starting from the date of financial close of the project according to the formula below:

 $Pn = 0.51 + 0.10^{\circ}(Cn/Co) + 0.09^{\circ}(Sn/So) + 0.15^{\circ}(Fn/Fo) + 0.15^{\circ}(Ln/Lo)$

Where;

Pn is the adjustment factor to be applied for civil, works;





Cn is the index value for the relevant month for Cement as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Sn is the index value for the relevant month for Steel Bar & Sheets as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Fn is the index value for the relevant month for Diesel Oil as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Ln is the index value for the relevant month for Mason (Raj) for Rawalpindi as per the Wage Rates published in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

Co, So, Fo and Lo are the reference values of the price indices for Cement, Steel Bar & Sheets, Diesel Oil and Mason (Raj) respectively as available at the time of financial close of the project.

The adjustments will be made on quarterly basis and where applicable, the amounts will be spread equally into quarters after considering the annual phasing allowed by the Authority in its upfront tariff determination.

All other project costs, excluding Interest During Construction will be considered as local costs and shall not be adjusted in any way.

Interest During Construction will be adjusted based on the combined impact of the allowed financing mix and One-Time adjustment of EPC cost.

viii) <u>Indexations/adjustment</u>

The tariff allowed to the company, after onetime adjustment, will remain unchanged throughout the tariff control period, except for the adjustments due to indexations/adjustment detailed in this order. The indexations of O & M, return on equity, principal repayment of debt and interest will be allowed on quarterly basis on 1st July, 1st October, 1st January and 1st April. Insurance component will be adjusted annually.

The mode of indexations/adjustment will be as under:





a) Indexations applicable to O & M:

VOM (LREV) = VOM (LREF) * CPI-G (REV)/ CPI-G (REF)

VOM (FREV) = VOM (FREF) * US CPI (REV) / US CPI (REF) * ER (REV) / ER (REF)

FOM (LREV) = FOM (LREF) * CPI-G (REV)/ CPI-G (REF)

 $FOM_{(FREV)} = FOM_{(FREF)} * US_{(REV)} / US_{(REV)} / US_{(REF)} * ER_{(REV)} / ER_{(REF)}$

Where:

VOM (LREV) = The revised applicable variable O & M local component

of tariff

 $VOM_{(FREV)}$ = The revised applicable variable O & M foreign

component of tariff

FOM (LREV) = The revised applicable fixed O & M local component of

tariff

FOM (FREV) = The revised applicable fixed O & M foreign component

of tariff

VOM (LREF) = The reference variable O & M local component of tariff

for the relevant period

VOM (FREF) = The reference variable O & M foreign component of

tariff for the relevant period

FOM (LREF) = The reference fixed O & M local component of tariff for

the relevant period

FOM (FREF) = The reference fixed O & M foreign component of tariff

for the relevant period

CPI-G (REV) = The revised Consumer Price Index (General) based on

latest available information, with respect to Consumer





Price Index (General) as notified by the Pakistan Bureau of Statistics

US CPI (REV) = The revised US CPI (all urban consumers) based on latest available information with respect to US CPI (notified by US Bureau of Labor Statistics)

ER (REV) = Revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan as at the last day of the preceding quarter

CPI-G (REF) = Reference Consumer Price Index (General) - Current reference 199.66 Consumer Price Index (General) for the month of May 2015 as notified by the Pakistan Bureau of Statistics

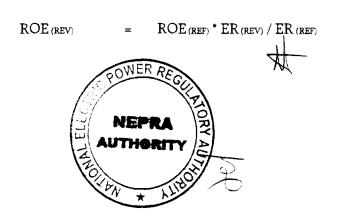
US CPI (REF) = Reference US CPI (all urban consumers) - Current reference 237.805 US CPI (all urban consumers) for the month of May 2015 as notified by the US Bureau of Labor Statistics

ER (REF) = Reference TT & OD selling rate of US dollar - current reference 101.95

b) Adjustment of insurance component

In case of insurance denominated in US \$, insurance cost component of tariff will be adjusted only on account of US \$/PKR exchange rate variation annually, not exceeding the insurance cost actually incurred. For availing this adjustment, the company will have to substantiate through authentic documentary evidence that the insurance cost allowed to it (from COD to date) does not exceed the insurance cost actually incurred.

c) Indexations applicable to return on equity





Where:

ROE (REV)

The revised applicable return on equity tariff component

indexed with exchange rate parity

ROE (REF)

= The reference return on equity tariff component for the

relevant period

ER(REV)

= Revised TT & OD selling rate of US Dollar as notified by the National Bank of Pakistan as at the last day of the

preceding quarter

ER(REF)

= Reference TT & OD selling rate of US dollar - current reference 101.95

d) Indexation applicable to interest on local debt

 ΔI = P (REV) * (KIBOR (REV) - 6.73%) /4

Where:

ΔΙ

= The variation in interest charges applicable corresponding to variation in 3 months KIBOR. Δ I can be positive or negative depending upon whether 3 months KIBOR (Rev) per annum > or < 6.73%. The interest payment obligation will be enhanced or reduced to the extent of Δ I for each quarter under adjustment.

P(REV)

= is the revised outstanding principal (as indicated in the attached debt service schedule to this order at Annex-II), after allowing onetime adjustment for exchange rate parity, on a quarterly basis at the relevant quarterly calculations date. Quarter 1 shall commence on the commercial operations date (i.e. the first figure will be used for calculation purposes of interest for the first quarter after COD).







KIBOR (REV) = Revised 3 months KIBOR as at the last day of the preceding quarter

Note:

Above described indexations/adjustment will be approved and announced by the Authority within fifteen days of the company's request for indexations/adjustment in tariff in accordance with the requisite mechanisms stipulated herein.

Terms and Conditions of Upfront Tariff:

- ix) This tariff is only applicable if the installed capacity of the project is in the range of 1 MW to 25 MW.
- x) The plant and machinery of the project, will be certified as new and of international standard by an independent engineer, appointed in accordance with the terms of power purchase agreement before any payment under this tariff is made. The said certificate shall be obtained and retained by the power purchaser.
- xi) The approved tariff will no longer remain applicable/valid if, financial close is not achieved for the project within 18 months from the date of this decision, or if the generation license is declined to the company/project.
- xii) The targeted maximum construction period after financial close is 36 months. No adjustment will be allowed in this tariff to account for financial impact of any delay in project construction. However, the failure of the project to complete construction within 36 months of financial close will not invalidate the tariff granted.
- **xiii)** The decision to opt for upfront tariff is irrevocable.
- xiv) In the above tariff no adjustment for certified emission reductions has been accounted for. However, if the company chooses to register for carbon credits, the subsequent proceeds from trading of carbon credits, shall be distributed between the power purchaser and the power producer in accordance with the Policy for Development of Renewable Energy for Power Generation 2006, as amended from time to time.





- **xv)** This tariff will be applicable for a period of thirty years (30) from the commencement of commercial operations.
- **xvi)** The terms and conditions specified herein form an integral part of this tariff.

xvii) Design & Manufacturing Standards:

Small hydro power generation system shall be designed, manufactured and tested in accordance with the latest ASME, ANSI, IEC standards or other equivalent standards. All plant and equipment shall be new.

xviii) Power curve of the hydro power complex:

The power curve of the hydro power plant shall be verified by the power purchaser, as part of the commissioning tests, according to the latest IEC standards and shall be used to measure the performance of the hydro generating units.

xix) Emissions Trading/Carbon Credits:

The company shall process and obtain emissions/carbon credits expeditiously (if applicable to the project) and the proceeds shall be distributed between the parties in accordance with the Policy for Development of Renewable Energy for Power Generation 2006, as amended from time to time.

xx) General:

- The power purchaser, before signing the Power Purchase Agreement, shall satisfy itself that the plant and machinery proposed to be installed is new and is of an acceptable quality.
- The project will be transferred, at the end of tariff control period of 30 years, to the power purchaser/relevant Government at a notional price of Rs. 1.
- The Power Purchase Agreement should stipulate terms and conditions, regarding periodic physical inspection of plant and machinery, ensuring that the power plant of the company allowed this tariff is properly maintained and continues to supply energy for the entire tariff control period of 30 years.





- Pre COD sale of electricity is allowed to the power producer, subject to the terms and conditions of Power Purchase Agreement, at the applicable tariff excluding principal repayment of debt component and interest component. However, pre COD sale will not alter the required commercial operations date stipulated by the Power Purchase Agreement in any manner.
- General assumptions, which are not covered in this determination and National Electric Power Regulatory Authority Upfront Tariff (Approval & Procedure) Regulations, 2011, may be dealt with as per the standard terms of the Power Purchase Agreement.

The order at paragraph 6 is recommended for notification by the Federal Government in the official gazette in accordance with Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

AUTHORITY

(Himayat Ullah Khan)

Member

(Syed Masee Member

(Major (Rtd.) Haroon Rasheed)

Member

(Tariq Saddozai)

Chairman

UPFRONT TARIFF FOR ALKA POWER (PRIVATE) LIMITED 1.8 MW HYDROPOWER PROJECT
REFERENCE TARIFF

	Energy Pur	chase Price	Capacity Purchase Price					1	
Year	Variable O&M Local	Variable O&M Foreign	Fixed O&M Local	Fixed O&M Foreign	Insurance	Return on Equity (ROE)	Principal Repayment	Interest	Total Tariff
	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh	Rs./kWh
1	0.1110	0.1110	0.5324	0.1331	0.6697	4.4318	2.9664	4.8734	13.8286
2	0.1110	0.1110	0.5324	0.1331	0.6697	4.4318	3.2817	4.5580	13.8286
3	0.1110	0.1110	0.5324	0.1331	0.6697	4.4318	3.6305	4.2092	13.8286
4	0.1110	0.1110	0.5324	0.1331	0.6697	4.4318	4.0164	3.8233	13.8286
5	0.1110	0.1110	0.5324	0.1331	0. 6 697	4.4318	4.4433	3.3964	13.8286
6	0.1110	0.1110	0.5324	0.1331	0.6697	4.4318	4.9156	2.9241	13.8286
7	0.1110	0.1110	0.5324	0.1331	0. 66 97	4.4318	5.4381	2.4016	13.8286
8	0.1110	0.1110	0.5324	0.1331	0. 6 697	4.4318	6.0161	1.8236	13.8286
9	0.1110	0.1110	0.5324	0.1331	0. 6 697	4.4318	6.6556	1.1842	13.8286
10	0.1110	0.1110	0.5324	0.1331	0.6697	4.4318	7.3630	0.4767	13.8286
11	0.1110	0.1110	0.5324	0.1331	0 6 697	4.5188	-		6.0759
12	0.1110	0.1110	0.5324	0.1331	0. 66 97	4.5188	·+	~	6.0759
13	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188			6.0759
14	0.1110	0.1110	0.5324	0.1331	0. 66 97	4.5188	-		6.0759
15	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188	_	_	6.0759
16	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188		_	6.0759
17	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188			6.0759
18	0.1110	0.1110	0.5324	0.1331	0. 66 97	4.5188		-	6.0759
19	0.1110	0.1110	0.5324	0.1331	0. 6 697	4.5188	_		6.0759
20	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188	_		6 0759
21	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188	_		6.0759
22	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188		u u	6.0759
23	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188		Ţ	6.0759
24	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188	_		6.0759
25	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188			6.0759
26	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188	_		6.0759
27	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188			6.0759
28	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188			6.0759
29	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188	_		6.0759
30	0.1110	0.1110	0.5324	0.1331	0.6697	4.5188	_	_	6.0759
Levelized Tariff	0.1110	0.1110	0.5324	0.1331	0.6697	4.4621	2.9354	2.1746	11.1292



Annex-II

UPFRONT TARIFF FOR ALKA POWER (PRIVATE) LIMITED 1.8 MW HYDROPOWER PROJECT

Debt Servicing Schedule for the Purpose of Indexation of Debt Component Only

		10	0% Local De	of Debt Compor				
Period	Principal Million Rs.	Repayment Million Rs.	Mark-Up Million Rs.	Balance Million Rs.	Debt Service Million Rs.	Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
	321.58	4.71	8.22	316.87	12.93		_	
	316.87	4.83	8.10	312.04	12.93			
	312.04	4.95	7.98	307.09	12.93			
	307.09	5.08	7.85	302.01	12.93			
1	321.58	19.58	32.16	302.01	51.74	2.9664	4.8734	7.839
	302.01	5.21	7. 72	296.79	12.93			
	296.79	5.34	7.59	291.45	12.93			
	291.45	5.48	7.45	285.97	12.93			
	285.97	5.62	7.31	280.35	12.93			
2	302.01	21.66	30.08	280.35	51.74	3.2817	4.5580	7. 83 9
	280.35	5.77	7.17	274.58	12.93			
i	274.58	5.91	7.02	268.67	12.93			
	268.67	6.06	6.87	262.61	12.93			
	262.61	6.22	6.72	256.39	12.93			
3	280.35	23.96	27.78	256.39	51.74	3.6305	4.2092	7.839
İ	256.39	6.38	6.56	250.01	12.93	ĺ		
	250.01	6.54	6.39	243.47	12.93		İ	
	243.47	6.71	6.23	236.76	12.93			
4	236.76	6.88	6.06	229.88	12.93			
4	256.39	26.51	25.23	229.88	51.74	4.0164	3.8233	7.839
	229.88	7.06	5.88	222.82	12.93			
	222.82	7.24	5.70	215.59	12.93		į	
	215.59	7.42	5.51	208.17	12.93			
	208.17	7.61	5.32	200.55	12.93			
5	229.88	29.32	22.42	200.55	51.74	4.4433	3.3964	7.8397
	200.55	7.81	5.13	192.75	12.93			
	192.75	8.01	4.93	184.74	12.93			
	184.74	8.21	4.72	176.53	12.93			
-	176.53	8.42	4.51	168.11	12.93			
6	200.55	32.44	19:30	168.11	51.74	4.9156	2.9241	7.839
	168.11	8.64	4.30	159.48	12.93			
1	159.48	8.86	4.08	150.62	12.93			
	150.62	9.08	3.85	141.54	12.93			
	141.54	9.32	3.62	132.22	12.93			
7	168.11	35.89	15.85	132.22	51.74	5.4381	2.4016	7.839
	132.22	9.55	3.38	122.67	12.93			
	122.67	9.80	3.14	112.87	12.93			
	112.87	10.05	2.89	102.82	12.93	1		
-	102.82 132.22	10.31	2.63	92.52	12.93			
8		39.70	12.04	92.52	51.74	6.0161	1.8236	7.8397
ŀ	92.52	10.57	2.37	81.95	12.93		}	
	81.95	10.84	2.10	71.11	12.93	į		
	71.11	11.12	1.82	59.99	12.93	İ	ŀ	
	59.99	11.40	1.53	48.59	12.93			
9	92.52	43.92	7.82	48.59	51.74	6.6556	1.1842	7.8397
	48.59	11.69	1.24	36.90	12.93		į	
1	36.90	11.99	0.94	24.91	12.93	ļ		
ļ	24.91	12.30	0.64	12.61	12.93	İ		
- 40	12.61	12.61	0.32	0.00	12.93			
10	48.59	48.59	3.15	0.00	51.74	7.3630	0.4767	7.8397



