Registrar

National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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No. NEPRA/R/DG(Trf)/TRF-372/SSML-2016/17683-87 August 18, 2026

Subject: **Decision of the Authority in the matter of Tariff Adjustment of Commercial Operations Date of Shahtaj Sugar Mills Ltd**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with **Annex-I & II** (total 09 pages) regarding tariff Adjustment of Commercial Operations Date of Shahtaj Sugar Mills Ltd in Case No. NEPRA/ TRF-372/SSML-2016.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official Gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 within 30 Calendar days from the intimation of this Decision. In the event the Federal Government fails to notify the subject tariff Decision within the time period specified in Section 31(7), then the Authority shall notify the same in the official Gazette pursuant to Section 31(7) of NEPRA Act.

Enclosure: As above

Wasim Anwar

(Wasim Anwar Bhinder)

Secretary,
Ministry of Energy (Power Division),
'A' Block, Pak Secretariat,
Islamabad.

Copy to:

1. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad
2. Mr. Shehriyar Abbasi, Deputy Secretary, Cabinet Division, Cabinet Secretariat, Islamabad
3. Chief Executive Officer, Central Power Purchasing Agency Guarantee Limited (CPPAG), Shaheen Plaza, 73-West, Fazl-e-Haq Road, Islamabad
4. Director, Shahtaj Sugar Mills Limited 72/C-1, M.M. Alam Road, Gulberg-III, Lahore

DECISION OF THE AUTHORITY IN THE MATTER OF TARIFF ADJUSTMENT AT COMMERCIAL OPERATIONS DATE OF SHAHTAJ SUGAR MILLS LTD

BACKGROUND

1. The National Electric Power Regulatory Authority (hereinafter referred to as the "Authority") determined the Upfront Tariff for new bagasse-based co-generation projects (hereinafter referred to as "Upfront Tariff") on May 29, 2013, comprising a reference tariff applicable for a period of thirty (30) years along with the applicable terms and conditions. The Upfront Tariff was notified by the Federal Government (hereinafter referred to as "GoP") vide SRO No. 771(1)/2013 dated Sept 3, 2013. Subsequently, the Authority amended certain terms and conditions of the Upfront Tariff through its decisions dated Aug 28, 2013, Jun 19, 2014, and Jun 17, 2015.

2. Shahtaj Sugar Mills Limited (hereinafter referred to as the "SSML" or the "Company") was granted the Upfront Tariff 2013 for its 32 MW (Gross Capacity) Bagasse Based Co-generation Power Project comprising two generating units of 16 MW each (hereinafter referred to as the "Project") located at Mandi Bahauddin, Punjab, vide the Authority's determination dated Jan 02, 2017.

3. Later on, SSML submitted the modification petition vide letter dated Jul 10, 2021 in light of the Cabinet Committee on Energy (CCOE) decision dated Feb 27, 2019, subsequently ratified by the Council of Common Interest (CCI), as reflected in Alternative and Renewable Energy (ARE) Policy, 2019. The Authority considered the modification petition and vide its decision dated Jan 24, 2022, approved the levelized tariff of Rs. 9.0611/kWh.

Commercial Operation Date (COD) ADJUSTMENT APPLICATION

4. SSML vide its letter dated Feb 10, 2026 requested the Authority to undertake one-time adjustment of tariff at COD in accordance with the Authority's determination dated Jan 24, 2022. SSML also submitted CPPA-G's notification dated Oct 13, 2025 confirming that the Project achieved its COD with effect from Oct 10, 2025.

PROJECT COST AT COD

5. The Authority hereby approves the following project cost based on the one-time adjustments under the reference upfront tariff and in line with relevant clauses of the agreement executed between CPPA-G and SSML:

Project Cost Heads	Ref Project Cost (Decision dated Jan 24, 2022) (USD Mill/MW)	Allowed Project Cost at COD (USD Mill/MW)
EPC Cost	0.8112	0.7960
Other Project Cost	0.0695	0.0682
Financial Fee and Charges	0.0176	0.0173
Interest During Construction	0.0708	0.0881
Total	**0.9691**	**0.9697**

JOINT APPLICATION OF CPPAG AND SSML FOR ADJUSTMENT IN TARIFF

6. Central Power Purchasing Agency – Guaranteed Limited (CPPA-G) and SSML, vide their joint application dated Mar 28, 2025, requested the Authority to approve certain amendments to SSML's tariff as agreed

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between them. The relevant clauses of the agreement from clause 2.1(a) to 2.1(g) executed between CPPA-G and SSML are as follows:

"(a) This Agreement shall become effective from the Effective Date as mentioned in the EPA (the "Effective Date").

(b) Reference Fuel Cost Component ("FCC") of the tariff shall be revised based on the reference price of bagasse of Rs. 4,500/ton with effect from Oct 1, 2021, and thereafter there will be 5% annual indexation on the applicable bagasse price for the previous year, provided that the calorific value of such bagasse shall be 7,000 BTU.

(c) The Seller hereby agrees to change its Return on Equity ("RoE") and Return on Equity during Construction ("RoEDC") components to seventeen percent (17%), PKR-based per annum, on NEPRA-approved equity at CoD calculated at a PKR/USD exchange rate of PKR 168/USD, with no future USD indexation.

(d) Subject to Section 2.1(d)(i)-(ii), the Operation & Maintenance Components (the "O&M") as determined by NEPRA shall continue.

(i) The quarterly indexation for Local Fixed O&M and Local Variable O&M shall be the lower of:(a) Five percent (5%) per annum; or (b) The actual average National Consumer Price Index ("NCPI") for the preceding twelve (12) months.

(ii) For each year, the current indexation mechanism of NEPRA shall continue for Foreign Variable O&M, provided that the PKR/USD depreciation shall be allowed only to the extent of 70% of the actual depreciation per annum. In case the PKR appreciates against the USD in a year, then 100% of such appreciation shall be passed on to the consumers.

(e) The Delayed Payment Rate under the EPA shall be KIBOR + 1% (prevailing on the due date of the invoice) per annum on any amount payable in Rupees, calculated for the actual number of days for which the relevant amount remains unpaid on the basis of 365 days in a year, without compounding, with effect from the Effective Date.

(f) The Seller shall be permitted to sell electricity to Bulk Power Consumers (BPCs) subject to amendments in its Generation License and Energy Purchase Agreement, and upon commitment for payment of compensation to the Purchaser for each unit of electricity supplied to the BPCs, in accordance with the mechanism stipulated in Annexure-A of this Agreement.

(g) The Metering Committee shall have the right, at any time during the Term of the Project, to inspect the Power Plant and associated facilities of the Seller to verify; (i)The total generation from the power plant. (ii) The supply of energy to the National Grid. (iii) The supply of energy to the allied sugar mill, and (iv) The supply of energy to the designated BPC(s)."

In light of the one-time adjustment mechanism prescribed in the upfront tariff, subsequent modification decision Jan 24, 2022 and joint application agreed between the SSML and CPPA-G the Authority hereby allowed the followings:

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Fuel Cost Component

6.1 SSML and CPPA-G in its joint application has mutually agreed that the reference price of bagasse shall be Rs. 4,500/Ton and thereafter shall be 5% annual indexation on applicable bagasse price for the previous year. The calorific value of bagasse for the purpose of FCC calculation shall be taken as 7,000 Btu/kg. The same shall become effective from Oct 01, 2021.

6.2 The Authority observed that SSML achieved its COD from Oct 10, 2025. Accordingly, after adjusting the bagasse price as per above mechanism, the revised price for the period Oct 01, 2025 to Sep 30, 2026 works out as Rs. 5,469.78/Ton with CV of 7,000 Btu/kg. Accordingly, the FCC works out as Rs. 10.8467/kWh and the same is allowed.

Insurance

6.3 The insurance component is allowed at Rs. 0.1102/kWh. The component is fixed with no further indexation.

Return on Equity

6.4 The Return on Equity (RoE) and Return on Equity During Construction (RoEDC) components are calculated at 17% per annum, PKR-denominated, on the NEPRA-approved equity at the COD of US$ 0.1939 million/MW (20% of the project cost), at an exchange rate of Rs. 168/US$, with no subsequent indexation. Accordingly, ROE and ROEDC components work out as Rs 1.4275/ kWh and Rs 0.1037/kWh respectively.

O&M Components

6.5 As per the mechanism agreed upon in the joint application dated March 28, 2025 between CPPA-G and SSML, the Revised reference O&M components for SSML for the quarter Jul-Sep 2025 are as follows:

Description	Revised Reference
	Rs/kWh
O&M variable (local)	1.1733
O&M fixed (local)	0.7823
Indexation Values	
N-CPI (General) average	263.32

6.6 Since the instant tariff is applicable w.e.f. COD i.e. Oct 10, 2025, based on the above mechanism, the following O&M components for the quarter Oct–Dec 2025 have been worked out and approved:

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Description	Oct-Dec 2025
	Rs/kWh
O&M variable (local)	1.1977
O&M fixed (local)	0.7985
Indexation Values	
N-CPI (General) average	268.78

6.7 The indexation mechanism as agreed upon in agreement is stipulated in order part below.

Debt Servicing component

6.8 The debt servicing component has been calculated based on debt (80% of project cost) amounting to US$ 0.7757 million/MW (Rs. 78.8151 million/MW at Rs. 101.60/US$), interest rate of 11.30% (KIBOR of 9.50% plus spread of 1.80%). Accordingly, the debt servicing component works out as Rs. 3.0407/kWh.

Sale of electricity to Bulk Power Consumers (BPCs)

6.9 Pursuant to 2.1(f) of the Agreement, the Company may sell electricity to Bulk Power Consumers (BPCs) subject to amendments in its Generation License and Energy Purchase Agreement, and upon commitment for payment of compensation to CPPAG for each unit of electricity supplied to the BPCs, in accordance with the mechanism stipulated in Annexure-A of the Agreement.

6.10 Final decision to allow such sales to BPCs by Bagasse plants will only be possible after having Generation License modification to be approved by NEPRA under the law on case-to-case basis.

ORDER

7. The Authority hereby approves the following adjusted tariff at COD for Shahtaj Sugar Mills Ltd (SSML) for the sale and delivery of electricity to CPPA-G;

Tariff Components	1-15 Years (Rs./kWh)	16-30 Years (Rs./kWh)	Indexations
Fuel Cost Component	10.8467	10.8467	5% annual indexation on previous year tariff
Variable O&M Local	1.1977	1.1977	Lower of 5% p.a. or average N-CPI for the preceding 12 months
Fixed O&M Local	0.7985	0.7985	
Insurance	0.1102	0.1102	-
Return on Equity	1.4275	1.4275	No indexation
Return on Equity During Construction	0.1037	0.1037	No indexation
Debt Service	3.0407	-	KIBOR
Total	**17.5251**	**14.4844**	

- The tariff has been worked out on a Build, Own and Operate basis.
- Project Cost of USD 0.9697 million/MW has been approved.
- Debt-to-equity ratio of 80:20 has been approved.
- The cost of debt of KIBOR 9.50% + Spread of 1.8% (after incorporating savings) for commercial local financing has been used.
- Debt Repayment period of 15 years for commercial local financing has been approved.
- ROE of 17% has been allowed at an exchange rate of PKR 168/ US$, with no further indexation.
- Construction period of 20 months has been allowed.
- Plant efficiency of 24.58% has been approved.
- Auxiliary Consumption of 8.5% has been approved.
- The above reference tariff is applicable for 30 years from commencement of COD (i.e. October 10, 2025).
- The reference tariff table is attached as Annexure-I.
- The reference debt Service schedule is attached as Annexure-II.

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I. PASS-THROUGH ITEMS

If the Company is obligated to pay any tax on its income derived from the generation of electricity, or if any non-refundable duties and/or taxes are imposed on the Company up to 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 CPPA-G on production of original receipts. This payment should be considered as a pass-through payment spread over twelve months. Furthermore, in such a scenario, the Company shall also submit to the CPPA-G details of any tax 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., excluding adjustment for taxes imposed on dividends as stated below, will be allowed. Withholding tax on dividends will not be allowed as a pass-through item.

II. INDEXATION / ADJUSTMENT

The following indexation shall apply to the reference adjusted upfront tariff:

a. FUEL COST COMPONENT

The fuel cost component of Rs. 10.8467 /kWh shall be indexed annually with effect from Oct 01 of each applicable year, based on a 5% annual indexation applied on the applicable bagasse price of the previous year. The reference price of bagasse is Rs. 5,469.78 /ton.

b. OPERATION & MAINTENANCE (O&M) COMPONENTS

The O&M cost components (Variable O&M Local and Fixed O&M Local) shall be indexed annually in accordance with the mechanism agreed between CPPA-G and SSML as approved by the Authority. The applicable indexation mechanism is as follows:

O&M (Rev)	=	O&M (Ref) * N-CPI (Rev) /N-CPI (Ref)
Where;		
O&M (Rev)	=	The revised O&M Local Component of Tariff
O&M (Ref)	=	The reference O&M Local Component of Tariff i.e. Rs. 1.1733/kWh for O&M variable (local) and Rs. 0.7823/kWh for & O&M fixed (local) shall be used for first year.
N-CPI (Rev)	=	Lower of 5% p.a. or average N-CPI for the preceding 12 months
N-CPI (Ref)	=	The reference N-CPI value for the first year shall be 263.32

Local O&M components (Variable and Fixed) shall be indexed on an annual basis until either the cumulative increase reaches the maximum limit of 5% or the average annual N-CPI value, whichever is lower. The final indexed component and average NCPI for the preceding year shall serve as the reference for the subsequent year.

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c. ADJUSTMENT OF DEBT SERVICING COMPONENT

The interest part of the fixed charge component will remain unchanged throughout the tariff control period except for the adjustment due to variation in interest rate as a result of variation in quarterly KIBOR according to the following formula;

$$\Delta I = P\ (Rev) \times (KIBOR\ (Rev) - 9.5\%) / 4$$

Where;

ΔI	=	The variation in interest charges applicable on the local loan corresponding to variation in the quarterly KIBOR. ΔI can be positive or negative depending upon whether KIBOR(REV) > or < 9.50%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter, applicable on a quarterly basis.
P (Rev)	=	The outstanding principal (as indicated in the attached Debt Service Schedule in this order) on a quarterly basis on the relevant quarterly calculation date.

III. TERMS AND CONDITIONS OF UPFRONT TARIFF

- The adjusted Upfront tariff is applicable for power generation using bagasse.
- The adjusted Upfront Tariff will be applicable and become effective on COD i.e. Oct 10, 2025.
- All energy offered for sale by the Co-generation projects shall be taken by the CPPA-G on priority.
- In case the company earns annual profit in excess of the approved ROE, then that extra amount shall be shared between the power producer and consumers through claw back formula to be decided by the Authority vide the relevant framework.
- The annual energy beyond the specified plant factor of 45% shall be paid the fuel and variable O&M cost components only.
- The procurement on priority dispatch/must run condition shall be made to the extent of specified annual plant factor of 45%. Only fixed components of tariff (applicable tariff minus fuel and variable O&M) shall be paid in case of non-dispatch by the power purchaser up to the annual plant factor of 45%. Beyond 45%, the plant shall be given dispatch on economic merit order basis.
- In case the company is obligated to pay any tax on its income from generation of electricity, or any duties and/or taxes, not being of refundable nature, are imposed on the company, the exact amount paid by the company on these accounts shall be reimbursed on production of original receipts. This payment shall be considered as a pass-through payment. However, withholding tax on dividend shall not be a pass-through item.
- The project is allowed the use of other biomass fuel such as rice husk, cotton stalk etc. in combination with Bagasse or separately. However, use of coal imported or local is not allowed.
- No adjustment for certified emission reductions has been accounted for in the tariff. However, upon actual realization of carbon credits, the same shall be distributed between the power purchaser and the power producer in accordance with the applicable GOP Policy, amended from time to time.

8. The EPA/PPA executed shall be consistent with all applicable documents including the Generation License and NEPRA's Tariff determination for the Company. Any provision of the EPA/PPA which is inconsistent with NEPRA's Tariff Determination shall be void to that extent, and its financial impact shall not be passed on to the end consumer.

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9. The instant decision along with annexures I & II is recommended for notification by the Government of Pakistan in the official gazette in accordance with Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997

AUTHORITY

(Amina Ahmed)
Member

(Engr. Maqsood Anwar Khan)
Member

(Waseem Mukhtar)
Chairman

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Annex-I

SHAH TAJ SUGAR MILLS LTD
REFERENCE TARIFF TABLE

Year	Fuel Component	Variable O&M Local	Fixed O&M Local	Insurance	Return on Equity	ROEDC	Loan Repayment	Interest Charges	Tariff
	Rs./kWh	*Rs./kWh*	*Rs./kWh*	*Rs./kWh*	*Rs./kWh*	*Rs./kWh*	*Rs./kWh*	*Rs./kWh*	*Rs./kWh*
1	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	0.5962	2.4445	**17.5251**
2	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	0.6665	2.3742	**17.5251**
3	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	0.7451	2.2956	**17.5251**
4	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	0.8329	2.2078	**17.5251**
5	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	0.9311	2.1096	**17.5251**
6	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	1.0408	1.9999	**17.5251**
7	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	1.1635	1.8772	**17.5251**
8	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	1.3007	1.7400	**17.5251**
9	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	1.4540	1.5867	**17.5251**
10	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	1.6254	1.4153	**17.5251**
11	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	1.8170	1.2237	**17.5251**
12	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	2.0312	1.0095	**17.5251**
13	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	2.2706	0.7701	**17.5251**
14	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	2.5383	0.5024	**17.5251**
15	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	2.8375	0.2032	**17.5251**
16	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
17	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
18	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
19	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
20	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
21	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
22	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
23	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
24	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
25	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
26	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
27	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
28	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
29	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
30	10.8467	1.1977	0.7985	0.1102	1.4275	0.1037	-	-	**14.4844**
Levelized Tariff	**10.8467**	**1.1977**	**0.7985**	**0.1102**	**1.4275**	**0.1037**	**0.9679**	**1.4855**	**16.9378**

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Annex-II

SHAH TAJ SUGAR MILLS LTD (SSML)

Debt Servicing Schedule (Local Loan)

KIBOR	9.50%	US$/PKR Parity	101.60	
Spread over KIBOR	1.80%	Debt in US$	0.7757	Million/MW
Total Interest Rate	11.30%	Debt in PKR	78.8151	Million/MW

Year	Base amount (Million PKR)	Principal Repayment (Million PKR)	Interest (Million PKR)	Balance Principal (Million PKR)	Total Debt Service (Million PKR)	Annual Principal Repayment Rs./kWh	Annual Interest Rs./kWh	Annual Debt Servicing Rs./kWh
	78.8151	0.5154	2.2265	78.2998	2.7419	0.1429	0.6173	0.7602
	78.2998	0.5299	2.2120	77.7698	2.7419	0.1469	0.6133	0.7602
	77.7698	0.5449	2.1970	77.2249	2.7419	0.1511	0.6091	0.7602
	77.2249	0.5603	2.1816	76.6646	2.7419	0.1553	0.6048	0.7602
1	**78.8151**	**2.1505**	**8.8171**	**76.6646**	**10.9676**	**0.5962**	**2.4445**	**3.0407**
	76.6646	0.5761	2.1658	76.0885	2.7419	0.1597	0.6004	0.7602
	76.0885	0.5924	2.1495	75.4961	2.7419	0.1642	0.5959	0.7602
	75.4961	0.6091	2.1328	74.8869	2.7419	0.1689	0.5913	0.7602
	74.8869	0.6264	2.1156	74.2605	2.7419	0.1737	0.5865	0.7602
2	**76.6646**	**2.4041**	**8.5636**	**74.2605**	**10.9676**	**0.6665**	**2.3742**	**3.0407**
	74.2605	0.6441	2.0979	73.6165	2.7419	0.1786	0.5816	0.7602
	73.6165	0.6622	2.0797	72.9543	2.7419	0.1836	0.5766	0.7602
	72.9543	0.6810	2.0610	72.2733	2.7419	0.1888	0.5714	0.7602
	72.2733	0.7002	2.0417	71.5731	2.7419	0.1941	0.5661	0.7602
3	**74.2605**	**2.6874**	**8.2802**	**71.5731**	**10.9676**	**0.7451**	**2.2956**	**3.0407**
	71.5731	0.7200	2.0219	70.8531	2.7419	0.1996	0.5606	0.7602
	70.8531	0.7403	2.0016	70.1128	2.7419	0.2052	0.5549	0.7602
	70.1128	0.7612	1.9807	69.3516	2.7419	0.2110	0.5491	0.7602
	69.3516	0.7827	1.9592	68.5689	2.7419	0.2170	0.5432	0.7602
4	**71.5731**	**3.0042**	**7.9634**	**68.5689**	**10.9676**	**0.8329**	**2.2078**	**3.0407**
	68.5689	0.8048	1.9371	67.7640	2.7419	0.2231	0.5370	0.7602
	67.7640	0.8276	1.9143	66.9365	2.7419	0.2294	0.5307	0.7602
	66.9365	0.8510	1.8910	66.0855	2.7419	0.2359	0.5243	0.7602
	66.0855	0.8750	1.8669	65.2105	2.7419	0.2426	0.5176	0.7602
5	**68.5689**	**3.3584**	**7.6093**	**65.2105**	**10.9676**	**0.9311**	**2.1096**	**3.0407**
	65.2105	0.8997	1.8422	64.3108	2.7419	0.2494	0.5107	0.7602
	64.3108	0.9251	1.8168	63.3857	2.7419	0.2565	0.5037	0.7602
	63.3857	0.9513	1.7906	62.4344	2.7419	0.2637	0.4964	0.7602
	62.4344	0.9781	1.7638	61.4563	2.7419	0.2712	0.4890	0.7602
6	**65.2105**	**3.7543**	**7.2134**	**61.4563**	**10.9676**	**1.0408**	**1.9999**	**3.0407**
	61.4563	1.0058	1.7361	60.4505	2.7419	0.2788	0.4813	0.7602
	60.4505	1.0342	1.7077	59.4163	2.7419	0.2867	0.4735	0.7602
	59.4163	1.0634	1.6785	58.3529	2.7419	0.2948	0.4654	0.7602
	58.3529	1.0934	1.6485	57.2595	2.7419	0.3032	0.4570	0.7602
7	**61.4563**	**4.1968**	**6.7708**	**57.2595**	**10.9676**	**1.1635**	**1.8772**	**3.0407**
	57.2595	1.1243	1.6176	56.1351	2.7419	0.3117	0.4485	0.7602
	56.1351	1.1561	1.5858	54.9790	2.7419	0.3205	0.4397	0.7602
	54.9790	1.1888	1.5532	53.7903	2.7419	0.3296	0.4306	0.7602
	53.7903	1.2223	1.5196	52.5679	2.7419	0.3389	0.4213	0.7602
8	**57.2595**	**4.6915**	**6.2761**	**52.5679**	**10.9676**	**1.3007**	**1.7400**	**3.0407**
	52.5679	1.2569	1.4850	51.3111	2.7419	0.3485	0.4117	0.7602
	51.3111	1.2924	1.4495	50.0187	2.7419	0.3583	0.4019	0.7602
	50.0187	1.3289	1.4130	48.6898	2.7419	0.3684	0.3918	0.7602
	48.6898	1.3664	1.3755	47.3234	2.7419	0.3788	0.3813	0.7602
9	**52.5679**	**5.2445**	**5.7231**	**47.3234**	**10.9676**	**1.4540**	**1.5867**	**3.0407**
	47.3234	1.4050	1.3369	45.9184	2.7419	0.3895	0.3706	0.7602
	45.9184	1.4447	1.2972	44.4737	2.7419	0.4005	0.3596	0.7602
	44.4737	1.4855	1.2564	42.9881	2.7419	0.4119	0.3483	0.7602
	42.9881	1.5275	1.2144	41.4606	2.7419	0.4235	0.3367	0.7602
10	**47.3234**	**5.8628**	**5.1049**	**41.4606**	**10.9676**	**1.6254**	**1.4153**	**3.0407**
	41.4606	1.5706	1.1713	39.8900	2.7419	0.4355	0.3247	0.7602
	39.8900	1.6150	1.1269	38.2750	2.7419	0.4478	0.3124	0.7602
	38.2750	1.6606	1.0813	36.6143	2.7419	0.4604	0.2998	0.7602
	36.6143	1.7076	1.0344	34.9068	2.7419	0.4734	0.2868	0.7602
11	**41.4606**	**6.5539**	**4.4138**	**34.9068**	**10.9676**	**1.8170**	**1.2237**	**3.0407**
	34.9068	1.7558	0.9861	33.1510	2.7419	0.4868	0.2734	0.7602
	33.1510	1.8054	0.9365	31.3456	2.7419	0.5005	0.2596	0.7602
	31.3456	1.8564	0.8855	29.4892	2.7419	0.5147	0.2455	0.7602
	29.4892	1.9088	0.8331	27.5803	2.7419	0.5292	0.2310	0.7602
12	**34.9068**	**7.3264**	**3.6412**	**27.5803**	**10.9676**	**2.0312**	**1.0095**	**3.0407**
	27.5803	1.9628	0.7791	25.6176	2.7419	0.5442	0.2160	0.7602
	25.6176	2.0182	0.7237	23.5993	2.7419	0.5595	0.2006	0.7602
	23.5993	2.0752	0.6667	21.5241	2.7419	0.5753	0.1848	0.7602
	21.5241	2.1339	0.6081	19.3903	2.7419	0.5916	0.1686	0.7602
13	**27.5803**	**8.1901**	**2.7776**	**19.3903**	**10.9676**	**2.2706**	**0.7701**	**3.0407**
	19.3903	2.1941	0.5478	17.1961	2.7419	0.6083	0.1519	0.7602
	17.1961	2.2561	0.4858	14.9400	2.7419	0.6255	0.1347	0.7602
	14.9400	2.3199	0.4221	12.6201	2.7419	0.6432	0.1170	0.7602
	12.6201	2.3854	0.3565	10.2347	2.7419	0.6613	0.0988	0.7602
14	**19.3903**	**9.1555**	**1.8121**	**10.2347**	**10.9676**	**2.5383**	**0.5024**	**3.0407**
	10.2347	2.4528	0.2891	7.7820	2.7419	0.6800	0.0802	0.7602
	7.7820	2.5221	0.2198	5.2599	2.7419	0.6992	0.0609	0.7602
	5.2599	2.5933	0.1486	2.6666	2.7419	0.7190	0.0412	0.7602
	2.6666	2.6666	0.0753	0.0000	2.7419	0.7393	0.0209	0.7602
15	**10.2347**	**10.2347**	**0.7329**	**0.0000**	**10.9676**	**2.8375**	**0.2032**	**3.0407**