



National Electric Power Regulatory Authority Islamic Republic of Pakistan

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Registrar

No. NEPRA/R/DL/LAM-01/ 17234-90

November 16, 2018

Chief Executive Officer,
Central Power Purchasing Agency (Guarantee) Limited,
Necca Building, Sector G-5/2,
Islamabad.

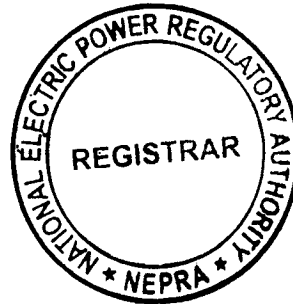
**Subject: Certificate of Registration No. MOR/01/2018
Application No. LAM-01
Central Power Purchasing Agency (Guarantee) Limited (CPPA-G)**

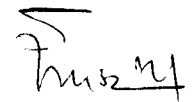
Reference: CPPA-G's application vide letter dated April 12, 2017 (received on April 14, 2017)

Enclosed please find herewith Certificate of Registration No. MOR/01/2018 along with Annex-A (Terms and Conditions, Registration for Market Operator) & Annex-B (Commercial Code) granted by National Electric Power Regulatory Authority (NEPRA) to Central Power Purchasing Agency (Guarantee) Limited (CPPA-G) for registration as Market Operator under Rule-3 of the NEPRA (Market Operator Registration, Standards and Procedure) Rules, 2015. Further, the Determination of the Authority in the subject matter is also attached.

2. Please quote above mentioned Certificate of Registration No. for future correspondence.

**Enclosure: Certificate of Registration
(MOR/01/2018)**




(Syed Safer Hussain)
16/11/18

Copy to:

1. Secretary, Ministry of Energy (Power Division), A-Block, Pak Secretariat, Islamabad.
2. Chief Secretary, Govt. of the Punjab, Punjab Secretariat, Lahore.
3. Chief Secretary, Govt. of Sindh, Sindh Secretariat, Sindh.
4. Chief Secretary, Government of Khyber Pakhtunkhwa, Civil Secretariat, Peshawar.
5. Chief Secretary, Government of Balochistan, Civil Secretariat, Zarghoon Road, Quetta
6. Chief Secretary, Government of Gilgit Baltistan, Civil Secretariat, Gilgit.

National Electric Power Regulatory Authority
(NEPRA)

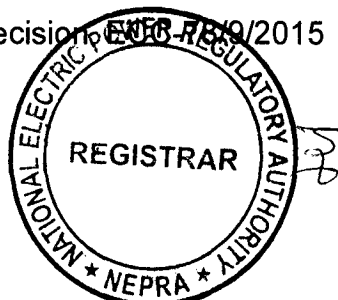
Determination of the Authority
in the Matter of Application of Central Power Purchasing
Agency (Guarantee) Limited (CPPA-G) for Registration as
Market Operator

November 16, 2018
Case No. LAM-01

(A). Background

(i). The CPPA-G is a wholly owned company of the Government of Pakistan (the GOP). The Company originated as a sub-department of the National Transmission and Despatch Company Limited (NTDC) and was later bifurcated by way of a Licensee Proposed Modification (LPM) filed by the NTDC in 2015. The statement of reasons in support of the LPM specified that functions of CPPA had been allocated to the NTDC as a stopgap measure, in addition to its core transmission and system operation business. CPPA was contemplated as a standalone entity but, due to practical considerations at the time of grant of licence to NTDC, could not be implemented. In 2015, the energy sector was considered to be in a position where a separate Central Power Purchasing Agency could be established and the envisioned market reforms could be implemented. On these submissions, the Authority on May 29, 2015 approved the LPM of NTDC, through which the functions of the Central Power Purchasing Agency (Guarantee) Limited (CPPA-G) and NTDC were bifurcated, with the former becoming a separate legal entity with distinct role, function and mandate.

(ii). Alongside these structural reforms, the Authority formulated and notified the National Electric Power Regulatory Authority (Market Operator Registration, Standards and Procedure) Rules, 2015 ("the Market Rules"). Under the Market Rules, the role, function and mandate of the market operator were prescribed, specifically under Schedules I and II. This mandate was further endorsed by the ECC, vide decision ~~ERC/REG/2015~~ 6018-REG/2015 dated April 30,



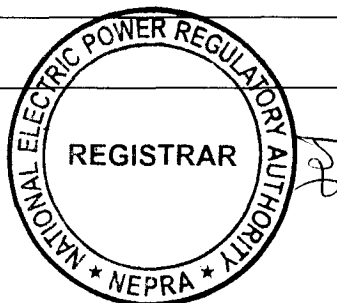
2016, which approved the mandate, role and function of the CPPA-G for the forthcoming years.

(iii). In order to commence the operations and functions described above, the CPPA-G was deemed as the market operator for a period of 2 years from the commencement of the Market Rules (from May 2015 to May 2017), under Rule-5 of the Market Rules, during the said period CPPA-G was required to submit an application to the Authority for registration as a formal market operator, under Rule-3 of the Market Rules.

(B). Filing of the Application

(i). The CPPA-G submitted an application for registration as market operator under Rule-3 of the Market Rules on April 12, 2017. Along with the application, the CPPA-G furnished documents as required under Rule-3(2) of the Market Rules as described below. With regards to the requirement of Commercial Code, the CPPA-G submitted that the already approved Commercial Code, with a singular amendment to Clause-1(26), is to be treated as their submission with their application under Rule-3 of the Market Rules.

Sr. No.	Documents Required under Rule-3(2) of the Market Rules	Status
1.	Copies of memorandum of association and articles of association	Submitted
2.	Particulars of its Chief Executive Officer and Directors	Submitted
3.	Documents showing that satisfactory system and controls are available to conduct the market operations	Submitted
4.	Documents showing that adequate financial, technical, organizational and human resources are available to act as the market operator in a proper and efficient manner on an on-going basis	Submitted
5.	Documents showing that sufficient contractual arrangements are in place to conduct the market operation	Submitted
6.	Draft Commercial Code	Amendment proposed to the previously approved Code
7.	Fees	Paid

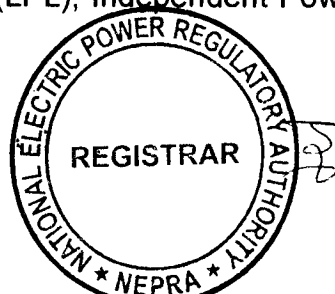


(ii). The Registrar examined the submitted application and found the same compliant with the Market Rules. Accordingly, the Registrar submitted the matter for the consideration of the Authority seeking admission of the application or otherwise. The Authority considered the matter in its Regulatory Meeting on May 10, 2017 and found the form and content of the application in compliance with Regulation-3(2) of the Market Rules. The Authority admitted the application for consideration of Registration as Market Operator as stipulated in Regulation-3(10) of the Market Rules. The Authority approved the advertisement containing (a). the prospectus; (b). a notice to the general public about the admission of the application of CPPA-G, to invite the general public for submitting their comments in the matter as stipulated in Regulation-3(11) of the Market Rules. Further, the Authority also approved the list of the relevant stakeholders for informing about the admission of the application of CPPA-G and to provide their comments for assistance of the Authority in the matter.

(iii). Accordingly, the advertisement was published in the press (“daily Express, Jang & Dawn”) on July 16, 2017. Apart from the said, separate letters were also sent to Government Ministries, their attached departments, representative organizations and individual experts on July 26, 2017. The said stakeholders were requested to submit their views/comments for assistance of the Authority.

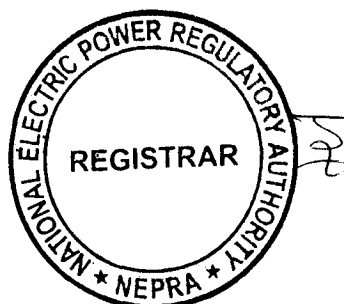
(C). Comments of Stakeholders

(i). In reply to the above, the Authority received comments from seventeen (17) stakeholders including Matol (Private) Limited (MPL), Halmore Power Generation Company Limited (HPGCL), Saba Power Company (Private) Limited (SPCPL), Orient Power Company (Private) Limited (OPCPL), Nishat Chunian Power Limited (NCPL), Atlas Power Limited (APL), Kohinoor Energy Limited (KEL), Uch Power (Private) Limited (UPPL), Uch-II Power (Private) Limited (UPPL-II), Hub Power Company Limited (HUBCO), Rousch (Pakistan) Power Limited (RPPL), Nishat Power Limited (NPL), Fauji Kabirwala Power Company Limited (FKPCL), Faisalabad Electric Supply Company Limited (FESCO), Lalpir Power Limited (LPL), Independent Power Producers Advisory



Council (IPPAC) and Narowal Energy Limited (NEL). The comments received from stakeholders were forwarded to CPPA-G for response/rejoinder. The CPPA-G submitted its response letter dated October 25, 2017. The pertinent points of the comments received from stakeholders are summarized as follows:-

- (a). The Competitive Power Market Model is being finalised and approved without taking stakeholder feedback and comments;
- (b). The Competitive Power Market Model is being implemented hastily and instantaneously;
- (c). The Competitive Power Market Model is complex, sophisticated and advanced and does not cater to Pakistan's ground realities;
- (d). The CPPA-G's market operator application should not be entertained until the energy sector is opened, decentralised and liberalized;
- (e). The CPPA-G does not have the financial strength to act as a market operator;
- (f). CPPA-G's market operator application contains no documents that show whether the CPPA-G has complied with the provisions of the Market Rules (specifically Rules 8(1)(d) – (g) and 13);
- (g). The issue of CPPA-G's continuity as a deemed market operator until the application is approved by the Authority;
- (h). Novation and treatment of PPAs executed by the CPPA-G under its deemed authorisation period (2015 – 2017).



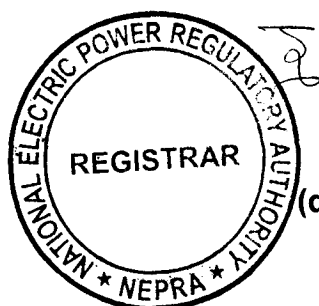
(D). Response of CPPA-G

(i). Abovementioned comments were forwarded to the CPPA-G for clarification/response which was submitted by CPPA-G vide letter dated November 28, 2017. The detailed rejoinder of CPPA-G is summarized as follows:-

(a). The development of the power markets has been prescribed under the Market Rules in a phased manner. Consultation with key stakeholders is envisioned to be undertaken under Phase-II (i.e. the approval phase), whereunder the CPPA-G will consult all stakeholders, and generation companies in particular. Furthermore, submission of the market operator application marks the start of Phase-II, where NEPRA is expected to initiate a consultative process with key stakeholders. All stakeholder concerns and comments will therefore be taken into consideration at that stage;

(b). The timeframe for implementation of the Competitive Power Market Model is prescribed under the Schedule-I of the NEPRA (Market Operator Registration, Standards and Procedure) Rules, 2015, which the CPPA-G is obligated to follow;

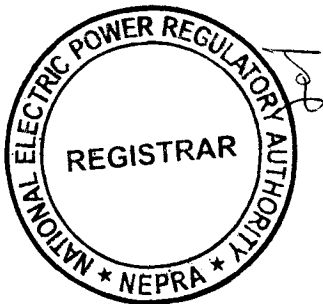
(c). The implementation of the Competitive Power Market Model has been prescribed in a phased manner, as per Schedule-I, and not in an instantaneous manner as highlighted by concerned stakeholders. The model will be initiated on July 01, 2020, which is in 3 years' time;



(d). A power market model cannot be declared as complex, sophisticated or advanced in comparison to other energy market models. Each jurisdiction has specific socio-political, legal, regulatory, contractual and other

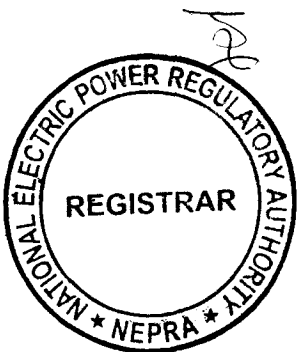
parameters that are unique to each jurisdiction. This is also the case in Pakistan and the CPPA-G has developed the Competitive Power Market Model in consideration of these parameters present in Pakistan;

- (e). Energy sectors around the globe are transitioning towards competitive energy market models, premised upon security of supply, efficiency, competitive pricing, progressive decarbonisation and (an aspect rarely relevant in other more developed jurisdictions) relief for the national exchequer. The CPPA-G has developed the Competitive Power Market Model in consideration of these objective and the acute parameters present in Pakistan;
- (f). Stakeholders have omitted the fact that under the existing regulatory framework, namely Phase-I and Phase-II, billing, settlement and other frameworks characteristic of free market operations are already being performed. Further, the current decentralised role of the CPPA-G (to act as the market operator during this transitional period and developer of the market model) has been accorded to the organisation by the ECC and NEPRA;
- (g). Moreover, implementation of the market model, as developed by the CPPA-G, necessitates the organisation to acting as the market operator. Denying the application of CPPA-G would therefore be detrimental to the whole energy market transition process. Current decentralised role of CPPA-G shall persist only till June 2020, after which the sector will be opened, decentralised and liberalised;



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- (h). The CPPA-G acts as the market operator for the sector and charges market fees from its participants. As per Rule-13 of the Market Rule, the CPPA-G shall not give guarantees, sureties or any other form of security to market participants. The CPPA-G is also not allowed to acquire or offer shares, securities or other interests in any person. As such, the CPPA-G does not require extensive financial strength to execute its duties and functions;
- (i). The Competitive Power Market Model contains 17 proposed groups of action that will execute a phased and stepwise implementation process of the market model, which cover the relevant provisions of the Market Rules;
- (j). The CPPA-G has developed an amended Commercial Code for approval. The Code provides for settlement, billing and payments and shall come into effect as of June 2017. On June 30, 2017, CPPA-G issued a letter to NEPRA to allow CPPA-G further time to draft and develop the Commercial Procedure under the Competitive Trading Bilateral Contract Market (CTBCM) and to allow the CPPA-G to continue with existing settlement, billing and payments procedures (as undertaken by CPPA-G of NTDC) till mid of 2018;
- (k). CPPA-G requested the Authority to extend the time period of its deemed authorisation as the market operator till the finalization of the application of CPPA-G;
- (l). The competitive trading market model caters for and protects the existing contracts signed with generation companies. Further, any other concerns that generation companies may have on the market operator application of CPPA-G shall be addressed by the approving authority (NEPRA) during its consultation process.



(E). Extension in Deemed Authorized Status Of CPPA-G

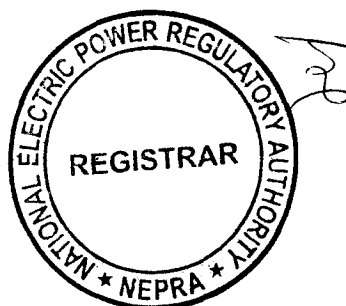
(i). The Authority, being conscious of the fact that registration of a Market Operator was being undertaken for the first time in the country, which presented a unique case for the regulator, and keeping in view the concerns expressed by stakeholders, determined that the subject required more deliberation and due diligence on part of the regulator and further consultation and involvement with market participants. Further, the Authority also considered the request of stakeholders and CPPA-G to extend the deemed authorized status of CPPA-G since deemed authorization of CPPA-G has expired in terms of Rule-3 of the Market Rules with the lapse of the transition period of two years (May 2015-May 2017). In view of the foregoing, the Authority decided through an interim order, dated January 03, 2018, granted an interim deemed authorization to the CPPA-G as the market operator till June 2018 or till the final decision of the Authority regarding registration of CPPA-G as the market operator (whichever was earlier).

(ii). Further, The Authority decided to hold a Public Hearing in terms of Rule-3(13) of the Market Rules to deliberate the issues raised by stakeholders and to obtain the response of CPPA-G.

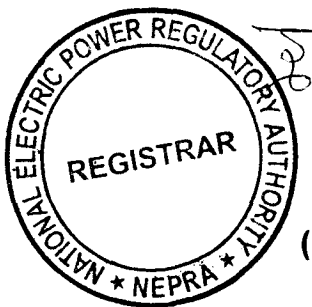
(F). Public Hearing

(i). In consideration of the above, the Public Hearing was scheduled for March 06, 2018. In this regard, notices were published in the press (“daily Express” and “the News”) on February 13, 2018. Further, separate letters were also sent to Government Ministries, their attached departments, representative organizations and individual experts on February 14, 2018, informing about the proposed Public Hearing.

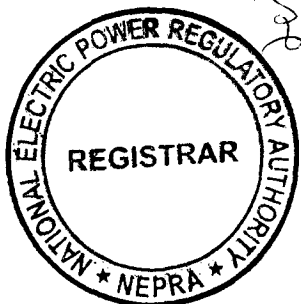
(ii). In this regard, the Authority in its Regulatory Meeting (RM 18-54) held on January 31, 2018, approved the following Issues to be discussed during the abovementioned Public Hearing:-



- (a). Whether CPPA-G has contractual arrangements in place, particularly novation of existing long terms agreement between NTDC and IPPS?
- (b). Whether CPPA-G has adequate technical, organizational and human resources available to perform market operations in an efficient manner?
- (c). Whether IT related infrastructure to enable CPPA-G to carry out its market operations for future competitive market and reporting requirements have been adequately established?
- (d). Whether CPPA-G has the financial strength to operate the competitive market and taken measure to establish any escrow account, settlement guarantee fund, revolving fund to ensure balance of payment?
- (e). Whether CPPA- G has sufficient capability for billing, settlement, management of cash flow, treasury management and other relevant banking arrangement for the purpose of collection and disbursement as per the Commercial Code?
- (f). How does the CPPA-G intend to cater to the interests of the provinces, the industry and the private sector while nominating its Board of Directors?
- (g). Whether CPPA-G has submitted to Authority annual reports and other reports as required under the NEPRA (Market Operator Registration, Standards and Procedure) Rules, 2015 and the Commercial Code?
- (h). Whether CPPA-G during the period of "Deemed Authorized Market Operator" has complied with the applicable laws and directions of the Authority?



- (i). Whether the Commercial Code submitted by CPPA-G along with its market operator application sufficiently provides the settlement procedure for Single Buyer Plus Model?
- (j). Whether the Commercial Code submitted by CPPA-G along with its market operator application caters for the future competitive market operations?
- (k). What measures have been taken by CPPA-G to ensure transparency and participation of stakeholders to carry out amendments in the Commercial code?
- (l). Whether CPPA-G still continues to procure electric power on behalf of the DISCOs including import of power from other countries after the transition period (2015-2017)? If yes, whether such functions of CPPA-G are in conflict with the functions of the market operator?
- (m). Whether CPPA-G has carried out any re-organization of its business structure, if yes, whether such re-organization is in line with the functions of market operator under the provisions of the NEPRA (Market Operator Registration, Standards and Procedure) Rules, 2015?
- (n). What steps have been taken CPPA-G to develop power market (Single Buyer Plus and Competitive Market) as envisaged in Schedule-I of the NEPRA (Market Operator Registration, Standards and Procedure) Rules, 2015?
- (o). Whether CPPA-G will be able to meet the timelines provided in the Schedule-I of the Rules to develop competitive market by 2020 and what measures have been taken on this regard?



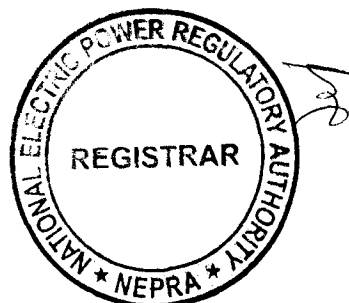
- (p). Whether the commercial procedures have been developed to address the peculiar features of existing long terms power purchase agreements, in the design of the future competitive power market?
- (q). Whether CPPA-G has carried out any process of consultation with the power producers who are the key stakeholders of power sector in Pakistan, on the upcoming Competitive Trading Bilateral Trading Market Model?
- (r). Whether it is in the interest of public to register CPPA-G as market operator?

(iii). The Authority uploaded the above Issues of Public Hearing on the NEPRA website and were also communicated to individual experts, representative organizations, Government Ministries and attached departments etc.

(iv). Accordingly, the Public Hearing was held on March 06, 2018 at NEPRA Tower Islamabad. In the said hearing, representatives of CPPA-G and other relevant stakeholders participated. The Authority directed the representatives of CPPA-G to make a detailed presentation on the frame Issues for the Public Hearing. Further, the Authority also directed the representatives of CPPA-G to submit their written response to the Issues of the Public Hearing.

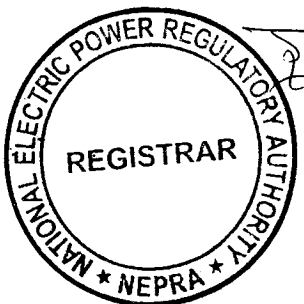
(G). Analysis/Findings of the Authority

(i). The Authority has examined the case in detail including the submissions of CPPA-G, the information provided in its application for the registration as Market Operator, comments of stakeholders, response of CPPA-G on the same, submissions of CPP-G on the Issue discussed during the Public Hearing, provisions of the Market Rules, Commercial Code and other applicable law.



(ii). In this regard, it is pertinent to mention here that CPPA-G has the following functions as prescribed in Schedule-II of the Market Rules:-

- (a). To acquire, take over or assume the functions and business of settlement and development of competitive power market from CPPA of NTDC and to carry on these functions and business;
- (b). Procurement of electric power on behalf of the DISCOs, including import of power from other countries;
- (c). Generation invoice verification on the basis of meter reading or dispatch scheduling report and terms of the respective Power Purchase Agreements;
- (d). Billing to the DISCOs based on the meter readings at Common Delivery Points as per the procedure defined in the commercial code;
- (e). Collection from the DISCOs and settlement to the market participants as per the commercial code;
- (f). Management of cash flow, treasury management and other relevant banking functions for the purposes of collection and disbursement as per the commercial code;
- (g). Updating, implementing, administering and enforcing the commercial code in relation to these rules;
- (h). Collecting information and statistics and publishing reports and information relating to the performance of the market operator administered market;
- (i). Administering the development of and amendments to the commercial code for submission to the Authority for approval;



- (j). Developing and implementing competitive power markets based on policy guidelines of the Federal Government and requirements of the Authority;
- (k). Publishing such information on its website as may be required by the Authority from time to time;
- (l). Liaising with other bodies having market functions similar to the market operator or administering competitive power markets; and
- (m). Any additional functions pursuant to requirements and provisions under the commercial code.

(iii). In this regard, analysis of the Authority can be organized in the following two categories:-

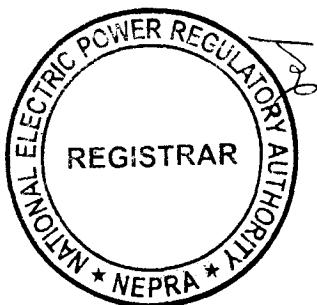
- (a). Conduct of CPPA-G during the period of Deemed Authorization as Market Operator (from May 28, 2015 – May 27, 2017); and
- (b). Capability/Ability of CPPA-G to function as Market Operator after its registration in terms of Rule-3 of the Market Rules.

(a). **Conduct of CPPA-G as Deemed Market Operator:-**

To examine the efficacy of CPPA-G to undertake the role of Market Operator going forward, it is pertinent to examine and highlight its performance in the period when it carried out functions as deemed market operator from May 2015 May 2017.

(i). **Unauthorized Exercise of Discretion by CPPA-G**

The Authority has determined multiple tariffs during May 2015 to May 2017 under the NEPRA Up-Front Tariff (Approval & Procedure) Regulations, 2011, including upfront tariffs for Bagasse and Small Hydropower

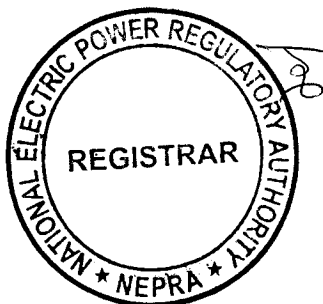


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generation plants. These tariffs have been determined by the Authority in pursuance of providing an incentivized regime for adoption of new and clean power generation technologies. However, the CPPA-G in various cases has refused to grant authorizations for projects being implemented under tariffs and licences granted by the Authority. Moreover, CPPA-G has continually acted in an ad-hoc and discriminatory manner towards various IPPs and other power projects. The CPPA-G is an entity registered and regulated by the Authority, and it cannot contravene or be in non-compliance with the directions and regulatory activity of the Authority. This includes refusal to grant authorizations to other licensed entities engaging in activities under approved tariffs, which the CPPA-G has blatantly done in cases involving bagasse and small hydropower projects. Such actions are not only in violation of the prevalent regulatory framework, but also void of any legal authority. In addition, the CPPA-G has also challenged various exclusive regulatory functions of the Authority in courts of law, including tariff determinations.

(ii). **Legal Proceedings Against CPPA-G**

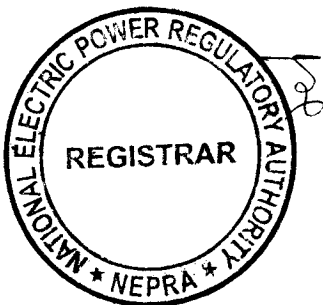
In addition, the CPPA-G has also taken numerous actions in the preceding years that have compelled the Authority to initiate penal proceedings against the Market Operator. These actions and fines prescribed on the CPPA-G are outlined as follows:-



Sr. No.	Date	Subject Matter	Status
1.	14-04-2016	Order passed in the matter of non-	Rs. 1 Million Fine

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		submission of timely information regarding Fuel Price Adjustments	Imposed
2.	28-08-2017	Order passed in the matter of for non-submission of timely information regarding Fuel Price Adjustment	Rs. 1 Million Fine Imposed
3.	31-03-2016 12-05-2016	Explanation and Show Cause Notice regarding revision of economic merit order	Disposed
4.	22-11-2017	Show Cause Notice regarding non-execution of PPA with Pehur Hydropower Project	Rs. 10 Million Fine Imposed and Rs. 500k for every contravening day
5.	11-01-2018	Show Cause Notice regarding discrimination between generation companies w.r.t issuance of consent of power purchaser	Pending Action



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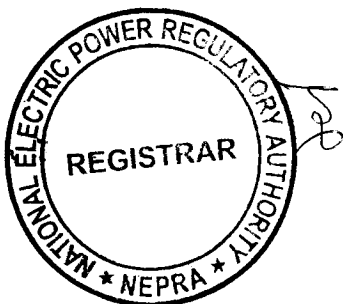
(iii). **Novation of Existing Contractual Arrangements, particularly long term agreements between NTDC and IPPs**

The CPPA-G has specified that they have achieved novation of 12 PPAs in total to date, through which the rights, liabilities and obligations under contract originally held by the NTDC have been transferred over to the CPPA-G. For the purpose of novation of the remaining PPAs and EPAs, deliberations are ongoing and the issue will be dealt with after a consensus has been reached.

The CPPA-G has simply provided an update with their application regarding the current status of novated PPAs. No specific or achievable plan has been submitted regarding PPAs that IPPs do not agree on novating.

(iv). **Non-adherence to Reporting Mechanism under the Commercial Code**

Commercial Code contains other provisions that the CPPA-G has been bound to follow and administer since 2015. For instance, under Chapter 10 Reporting Mechanism, the CPPA-G is obligated to submit specific reports to the Authority, including Settlement Report (including Preliminary Settlement Statement, Settlement Report (including Final Settlement Statement) and Non-Payment Report. Such reports have not been submitted by the CPPA-G since its creation. Similarly, CPPA-G's responsibilities under Chapter 8 Settlement & Billing, irrespective of the Chapter's application on market participants, have also not been fulfilled by the Market Operator. These include opening of Escrow Accounts



and preparation of Subsidy Collection Reports, Cash Collection Reports and Pending Liabilities Reports.

(b). **Capability/Ability Of CPPA-G to Function as Market Operator after its Registration in terms of Rule-3 Of the Market Rules:-**

(i). **Requirement to Submit Draft Commercial Code along with Registration Application**

The Authority observed that CPPA-G has submitted the instant application for registration as the Market Operator as required under Rule-5 of the Market Rules. The application for registration is to be submitted in accordance with Rule-3 of the Market Rules, reproduced as follows:-

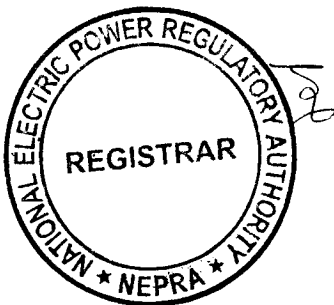
3. Registration of market operator:- (1)

There shall be a market operator registered by the Authority and authorized to conduct the market operations, subject to the eligibility criteria set forth in sub-rule (2).

(2) Any entity desirous of being registered as a market operator and to be authorized to conduct the market operations shall make an application to the Registrar, which shall be accompanied by-

(f) draft commercial code;

Under Rule-3(2)(f) of the Market Rules above, the CPPA-G was required to submit a draft commercial code with its application. Upon review of the documents on record it

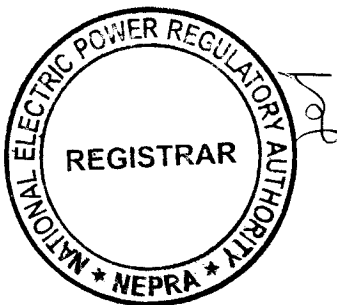


was observed that the CPPA-G has referred to this requirement on the cover page of their application dated April 12, 2017, as “*already approved by the Authority*”. No further mention, document or draft has been submitted alongside the application.

In this regard, it is pertinent to examine the role of CPPA-G with respect to developing commercial procedures under Schedule-II of the Market Rules, reproduced as follows:-

- updating, implementing, administering and enforcing the commercial code in relation to the Market Rules;
- collecting information and statistics and publishing reports and information relating to the performance of the market operator administered market;
- administering the development of and amendments to the commercial code for submission to the Authority for approval, and
- developing and implementing competitive power markets based on policy guidelines of the Federal Government and requirements of the Authority.

Under Schedule-I of the Market Rules, functions of the CPPA-G are further clarified and a transition of the energy sector is divided into three phases, namely:-



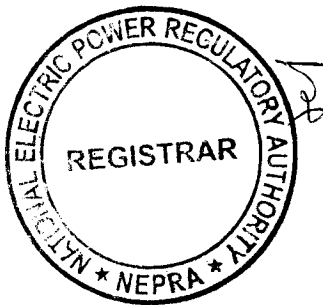
Transition	Market Design	Timeline
Phase I	Single Buyer	Market Structure as of

		2015
Phase II	Single Buyer Plus	2016 – 2020
Phase III	Competitive Market Operation	Commencing from 1 st July 2020 (with no postponement thereon)

In pursuance of the above, the CPPA-G submitted a draft Commercial Code to the Authority in May 2015 for approval under Rule-5 of the Market Operator Rules. The same was approved by the Authority on June 02, 2015. However, it is pertinent to highlight that this Commercial Code was submitted by the CPPA-G under Rule-5 of the Market Rules in its capacity as the authorised deemed market operator, which is an authorisation granted for a period of two (02) years.

The 2015 Commercial Code was temporary and a stopgap measure until a comprehensive and suitable Commercial Code is submitted to the Authority for approval alongside a market operator application under Rule-3 of the Market Rules. Such a Code (to be submitted under Rule-3 of the Market Rules) is required to reflect the future market structure and provide for the principles, procedures, rights and obligations that will govern the Market Operator, Participants and other services providers. The 2015 Commercial Code as submitted by the CPPA-G along with this registration application, lack provisions that fulfil aforementioned requirements.

This requirement is also substantiated by the provisions of the existing 2015 Commercial Code, under which CPPA-G was to initially follow the same procedures for



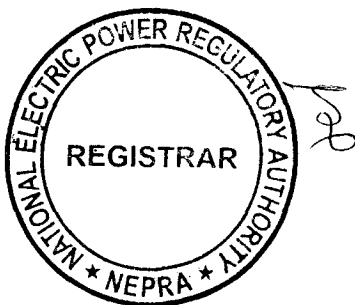
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settlement, billing, and payments as were followed by CPPA of NTDC (during transition period i.e. June 2017). At end of that period new procedures described in clauses 8.2 to 8.8, 9.2, 9.3 and 9.4 were to come into effect, which provision new and updated mechanisms and frameworks for the forthcoming energy market.

Moreover, deemed authorized period was extended by the Authority, vide an interim order dated January 03, 2018, till June 2018 or till the final decision of the Authority in the registration of CPPA-G as the market operator (whichever was earlier). However, this interim authorisation does not extend the inoperativeness of the Commercial Code, which remains applicable on all transactions and contracts executed after May 2017, nor does this interim arrangement absolve the CPPA-G from its obligation to submit a revised and amended Commercial Code as per Rule-3(2)(f) of the Market Rules.

(ii). CPPA-G's Request for Status Quo

Following from the above, it is highlighted that the requirement of submitting an amended and comprehensive Commercial Code has been acknowledged by the CPPA-G itself, in letter no. CPPA-G/2017/CEO/SMD/8797-8798 dated June 30, 2017, reproduced as follows:-



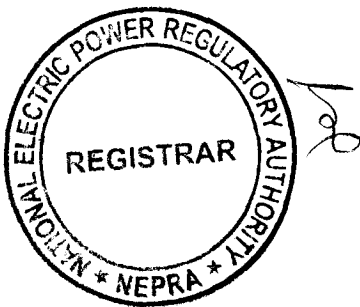
"The activities that need to be performed in order to achieve the target of building the competitive market have been divided into 17 group actions. These group actions include a number of steps that will lead to the establishment of CTBCM. One of the most important actions is the amendment of

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commercial code because the regulatory and policy framework need to be consistent with the market structure. Therefore, Commercial Code will need to be adjusted to the new market conditions that will facilitate and reflect the market structure and institutional arrangements”.

The new Market Commercial Code will set the objectives, principles, rules, procedures, rights and obligations that will govern the Market Operator, Participants and as applicable services providers. It will cover the details and requirements of settlement process including the market balancing pricing and trading...The new Commercial Code, once drafted, will be submitted to NEPRA by CPPA-G for review and approval.

As per the current Commercial Code it is envisaged that initially, CPPA-G shall follow the same procedure for settlement, billing, and payments as were followed by CPPA of NTDC, for a transition period not longer than two years after issuance of the Commercial Code i.e. June 2017. At end of that period new procedures described in clauses 8.2 to 8.8, 9.2, 9.3 and 9.4 shall come into effect.



The Authority observed that as per the proposed CTBCM Plan the daft new Commercial Procedure shall be prepared by CPPA and will be submitted to NEPRA for approval and it is envisaged that it will be approved by mid of 2018. It is therefore requested to enhance the period for

implementation of new billing, settlement and payment systems by mid of 2018."

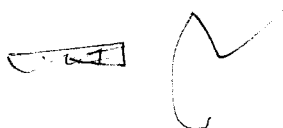
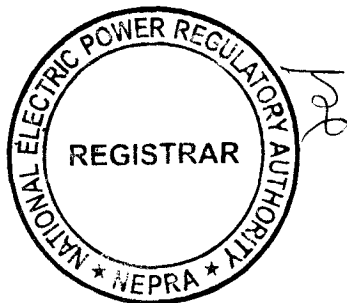
CPPA-G's Acceptance of Requirement to submit

Commercial Code: CPPA-G itself has admitted that as per the current Commercial Code it is envisaged that initially, CPPA-G shall follow the same procedure for settlement, billing, and payments as were followed by CPPA of NTDC, for a transition period not longer than two years after issuance of the Commercial Code i.e. June 2017. At end of that period new procedures described in clauses 8.2 to 8.8, 9.2, 9.3 and 9.4 shall come into effect. However, in this regard the CPPA-G has submitted that new commercial procedures shall be prepared by the CPPA-G once the Competitive Market Bilateral Trading Competitive Market Plan is approved by the Authority. As such, the CPPA-G has requested that the period for implementation of new billing, settlement and payment systems may be extended to mid of 2018.

(iii). Implementation of the 'Single Buyer Plus' Model (2016-2020)

Under Schedule-I of the Market Rules, the CPPA-G was mandated with developing the energy sector in a phased manner; which includes (i) Single Buyer Model (market structure as of 2015), (ii) Single Buyer Plus (2016 - 2020) and (iii) Competitive Market Operation (commencing from July 01, 2020 with no postponement thereon). During these phases, the CPPA-G was required to execute its role as the Market Operator and administer the makeshift.

Under Phase-II, a Single Buyer Plus model was to be implemented, under which the energy sector was to be

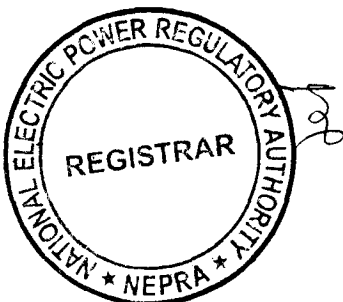


liberalized, with bilateral contracts between generation companies and DISCOs to be executed. However, the Authority has observed that this framework has not been practically implemented to date. More significantly, the CPPA-G is still continuing to execute long-term PPAs on behalf of DISCOs. This raises concerns over its ability or efficacy in undertaking the role of market operator going forward and warrants stringent regulation on behalf of NEPRA.

(iv). **Conflict of Interest**

At present, the CPPA-G is undertaking two functions under the Market Rules, which included (a). procurement of electric power and (b). energy market development. Going forward, the CPPA-G cannot function in this dual capacity. The CPPA-G is set to becoming the Market Operator of the Competitive Market Regime, under which it will be overseeing all Market Operations as well as providing a Balancing and Settlement function. While doing so, the CPPA-G cannot continue its current function of power procurement since this would in effect make the CPPA-G a Market Participant. This creates a blatant conflict of interest concern, where the Market Operator/Regulator is itself participating in the said Market.

In view thereof, the CPPA-G has to completely and effectively segregate or remove its power procurement function (and all underlying agreements, arrangements and elements) before the commencement of the Competitive Market. This aspect needs to be considered and requires appropriate amendment in the Market Rules.

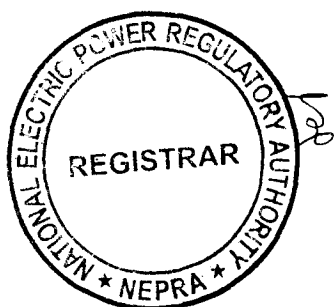


In this regard, the CPPA-G has highlighted that an SPS shall be created, that shall hold all un-novated PPAs, and an Independent Auction Administrator shall be created for new capacity procurement. However, CCPA-G has not submitted substantive details on the actual implementation of such entities. Further, no briefing has been received from the CPPA-G on the actual establishment or current functioning of the SPS. Moreover, even the creation of such an entity is mere organisational restructuring, with no material change, which highlights a lack of long-term and effective strategy, on part of CPPA-G, for dealing with its conflict of interest issues going forward.

(v). **Non-Compliance of Law w.r.t Board of Directors of CPPA-G**

The Board of Directors (BoD) of an organization plays a fundamental role in corporate stewardship and performance of government owned entities. The Board carries essential fiduciary responsibilities to perform and act as an intermediary between the state (as a shareholder) and the company and its executive management. As such, it is imperative that a BoD should exercise independent and objective judgment, and shield the organisation from ad-hoc political intervention.

Under Rule-3(2) of the Market Rules of the Public Sector Companies (Corporate Governance) Rules, 2013 prescribed by the Securities and Exchange Commission of Pakistan, all 'public sector companies' (i.e. companies directly or indirectly, owned or controlled by the GoP or an instrumentality of the GoP) are required to have their Boards comprise of at least one-third of its total members as independent directors. The independent director

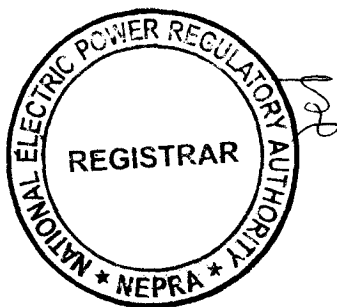


criterion has been exhaustively defined under Rule-2(d) of the Market Rules, which includes directors to be non-executive and not be in the service of Pakistan or anybody or institution owned or controlled by the GoP. Therefore, it is observed that the composition of the Board of the CPPA-G is required to be in conformity with the prevailing corporate governance rules.

(vi). **Balancing and Settlement under the CTBCM**

Under the Schedule-I of the Market Rules, the role of the CPPA-G is envisioned to change and evolve with the evolution of the energy sector. With the establishment of the Competitive Market, the role of the Market Operator will change drastically from its current functions. One of the principal roles of the Market Operator in the forthcoming Bilateral Contract Energy Market Framework is the function of Balancing and Settlement. Differentiated from physical balancing (i.e. closing the gap between supply and demand of electric power in the system), the CPPA-G shall be undertaking the financial side of the balancing mechanism (i.e. overseeing the sale/purchase of differences between contracted and actual energy and firm capacity). This function is to be implemented by the CPPA-G for all Market Participants going forward.

CPPA-G's Financial Strength: The major issue foreseeable with Balancing and Settlement role of CPPA-G is its financial strength, or lack thereof. At present, the CPPA-G functions on the backing of sovereign guarantees granted by the GoP. Such government funding will not be available to the Market Operator after the commencement of the Competitive Market and the CPPA-G has not provided any comprehensive and



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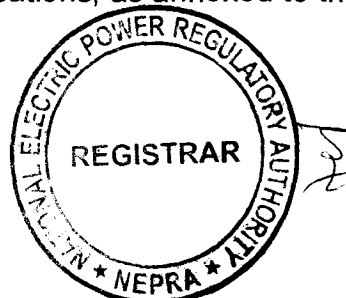
pragmatic plan on how the adequate finances will be arranged for executing its considerable Balancing and Settlement function.

Linkages with System Operator: Apart from the CPPA-G itself, an effective Balancing Mechanism requires comprehensive linkages and coherence between the Market Operator (that oversees the financial aspects of Balancing) and the System Operator (that oversees the physical aspects of Balancing). Without such cohesion, an operational and effectual Balancing Mechanism in the energy sector is unattainable. In this regard, the CPPA-G has not provided any information regarding whether the necessary cohesion (and underlying frameworks/infrastructure) between the Market Operator and System Operator have been employed.

(H). Decision

(i). The Authority has exhaustively examined and deliberated the documents, submissions and arguments forwarded by the CPPA-G and other stakeholders in multiple proceedings in the matter. The Authority is of the view that stringent and proactive regulation/oversight on part of the regulator is fundamental towards ensuring that the CPPA-G fulfils its role as the market operator in the interest of market development and stakeholders. In this regard, the Authority has prescribed set of term and conditions along with the time frame for compliance in the Certificate of registration.

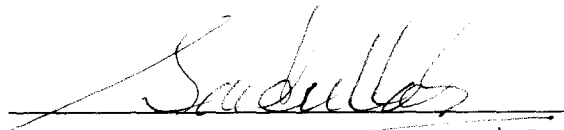
(ii). The Authority has further identified that the Commercial Code, being a fundamental regulatory instrument in the development and administration of the energy sector and the upcoming competitive regime, is at present inadequate for fulfilling its purpose and has created legal anomalies and uncertainties for market participants. Therefore, the Authority has approved the Commercial Code with modifications, as annexed to this determination.




(iii). In view thereof, the Authority hereby approves the registration of CPPA-G as market operator under Rule-3 of the Market Rules subject to the terms and conditions set out in the Certificate of Registration annexed herewith. The grant of registration shall be subject to the provisions contained in the NEPRA Act, relevant rules, regulations, codes framed there under and the other applicable documents. Further, the Authority hereby declares that anything done, actions taken or instruments, or contracts, executed by the CPPA-G from the date specified in Article-3.2 of the Terms and Conditions for Registration shall have effect as if done, taken or executed in pursuance of this registration.

Authority:


Saif Ullah Chatha
(Member)


16.11.2018

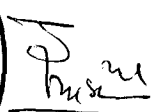
Rematullah
(Member/Vice Chairman)


3/8/11/2018

Tariq Saddozai
(Chairman)






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National Electric Power Regulatory Authority

CERTIFICATE OF REGISTRATION

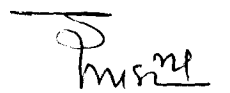
Market Operator

In exercise of the powers conferred by Rule-3 of the National Electric Power Regulatory Authority (Market Operator Registration, Standards and Procedure) Rules, 2015, the National Electric Power Regulatory Authority hereby grants a certificate of registration to **Central Power Purchasing Agency (Guarantee) Limited** (having Corporate Universal Identification No. 0068608), as a Market Operator subject to the provisions of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), as amended or replaced from time to time, the National Electric Power Regulatory Authority (Market Operator Registration, Standards and Procedure) Rules, 2015 or as may be specified or imposed hereafter by the Authority and the terms and conditions prescribed in the annexure attached herewith.

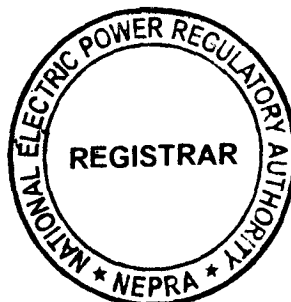
The registration number of the Market Operator is **MOR/01/2018**

Dated: 16/11/2018

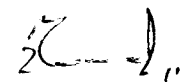
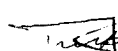
Place: ISLAMABAD


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Registrar



For and on behalf of THE NATIONAL ELECTRIC POWER REGULATORY
AUTHORITY

Annexure-A

TERMS AND CONDITIONS REGISTRATION FOR MARKET OPERATOR

National Electric Power Regulatory Authority, in exercise of the powers under Rule-3 of the National Electric Power Regulatory Authority (Market Operator Registration, Standards and Procedure) Rules, 2015 (“the Market Rules”) hereby grants this registration to Central Power Purchasing Agency (Guarantee) Limited (having Corporate Universal Identification No. 0068608) subject to the Articles and conditions set out herein, for a period of time prescribed in Article 3.1 hereunder.

I. Interpretation

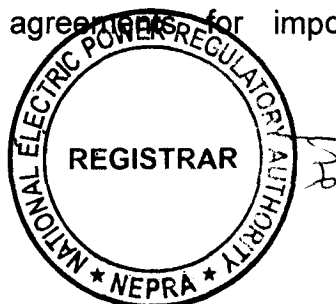
1.1 In this registration, unless the context otherwise requires:

- (i) “**Act**” means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (Act XL of 1997) as amended from time to time;
- (ii) “**Commercial Code**” means the specific procedure or set of procedures established by the Market Operator, and duly approved by the Authority, for carrying out market operations including commercial operations, processes and functions performed under this registration and the Market Rules;
- (iii) “**Competitive Market Operation**” means the establishment and operation of competitive market frameworks in pursuance of the Market Rules;
- (iv) “**Corporate Governance Rules**” means the rules, regulations and guidelines issued by the Securities and Exchange Commission of Pakistan or the Federal Government dealing with the subject of



corporate governance, including but not limited to the Public Sector Companies (Corporate Governance) Rules, 2013;

- (v) "**CPPA-G**" means the Central Power Purchasing Agency (Guarantee) Limited;
- (vi) "**Date of Registration**" means the date of issuance of this registration;
- (vii) "**DISCO**" means a market participant providing electricity distribution services other than K-Electric;
- (viii) "**Effective Date**" means the date of coming into effect of this registration as specified in Article 3.2;
- (ix) "**Market Operator**" shall have the same meaning ascribed to it in Rule-2(1)(g) of the Market Rules;
- (x) "**Market Operator Functions**" means the functions to be performed by the Market Operator in pursuance of the Market Rules and the authorizations, registrations, directions and Orders of the Authority;
- (xi) "**Market Rules**" means the National Electric Power Regulatory Authority (Market Operator Registration, Standards and Procedure) Rules, 2015 (as amended from time to time);
- (xii) "**NEPRA**" or the "**Authority**" means the National Electric Power Regulatory Authority established under Section-3 of the Act;
- (xiii) "**Power Purchase Contract**" means an agreement for the procurement or purchase of electric power and, where the context permits, shall include Power Purchase Agreements, Energy Purchase Agreements, agreements for import of power and



agreements signed by WAPDA with an IPP under or prior to the 1994 Policy, signed by the NTDC (to procure power on behalf of DISCOs) with an IPP, signed by the NTDC with a generation company or WAPDA Hydel or signed by the CPPA-G (to procure power on behalf of DISCOs);

(xiv) **“Power Procurement and Agency Functions”** means the functions relating to procurement of power as an agent of DISCOs as authorized by the Authority;

(xv) **“Sale of Power at Retail”** means sale of electric power to consumers;

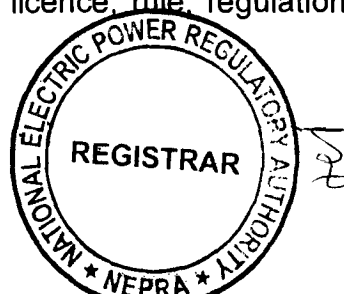
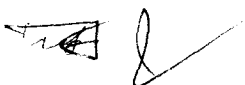
(xvi) **“Sale of Power at Wholesale”** means sale of electric power to any person for resale;

(xvii) **“Single Buyer Phase”** means the time period, prescribed in Schedule I of the Market Rules, during which procurement of power shall be exclusively carried out by the CPPA-G on behalf of DISCOs; and

(xviii) **“Single Buyer Plus Phase”** means the time period, prescribed in Schedule I of the Market Rules, during which procurement of power shall be carried out by DISCOs or by the CPPA-G on behalf of DISCOs;

1.2 Words and expressions used but not defined herein shall have the same meaning as in the Act and rules and regulations made thereunder;

1.3 Unless otherwise specified and without prejudice to any provision which restricts such variation, supplement or replacement, any reference to any agreement, licence, rule, regulation, statute, code,



standard or other instrument shall include a reference to such agreement, licence, rule, regulation, statute, code, standard or other instrument as varied, supplemented, amended or replaced from time to time;

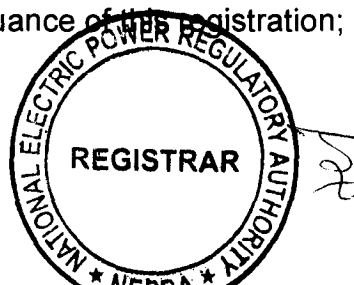
- 1.4 Where any obligation under this registration is expressed to require performance within a specified time limit, that obligation shall continue to be binding and enforceable after that time limit if the obligor fails to perform that obligation within that time limit (but without prejudice to all rights and remedies available against the obligor by reason of the obligor's failure to perform within the specified time limit);

II. Authorization

- 2.1 The Authority authorizes the CPPA-G to undertake market operator functions under this registration subject to the provisions of the Act, specifically Section-23A, rules and regulations made under the Act, applicable law and the terms and conditions prescribed hereunder;

III. Term and Commencement

- 3.1 This registration shall be for a period of 5 years from the Date of Registration or till such date upon which Section-23A of the Act comes into force as per Section-1(3) of the Act (whichever is earlier);
- 3.2 Notwithstanding any order, direction or authorization of the Authority, this registration shall be deemed to be in effect from the Twenty-Eighth day of May of the year Two Thousand and Seventeen;
- 3.3 Anything done, actions taken or instruments, or contracts, executed by the CPPA-G from the Effective Date shall have effect as if done, taken or executed in pursuance of this registration;



IV. Modification of Registration

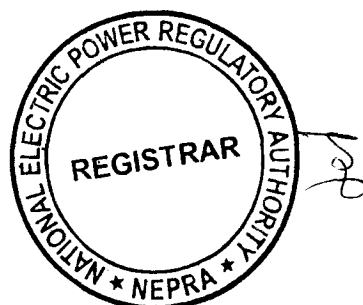
4.1 The Authority may, on its own motion or upon application by the CPPA-G, amend or modify this registration pursuant to the provisions of the Act, the rules and regulations made thereunder, or any determination, direction or order of the Authority;

V. General Obligations

5.1 During the term of this registration, the CPPA-G shall:

- (i) Perform the market operator functions reliably, transparently, objectively and independently and in a non-discriminatory and unbiased manner;
- (ii) Carry out all works related to the market operator functions, including but not limited to:
 - (a) Preparation of a model for competitive market operations that encompasses both sale of power at wholesale and sale of power at retail and submit the same for the approval of the Authority;
 - (b) Developing, administering and enforcing the Commercial Code;
 - (c) In the case of bilateral contracts between multiple buyers and sellers, settlement of imbalances;
 - (d) Development of commercial standard operating procedures;



- (e) Procurement of power on behalf of DISCOs during the Single Buyer Phase and Single Buyer Plus Phase; and
- (f) Cash flow management, treasury management and other relevant functions for the purposes of collection and disbursement as per the Commercial Code;
- (iii) Not discriminate between market participants, whether prospective or incumbent and whether sponsored privately or by the Federation or Provincial Governments of Pakistan;
- (iv) Employ a sufficient number of qualified personnel to ensure that its activities are conducted effectively, efficiently, reliably and prudently;
- (v) Ensure that it possesses the technical and financial capability, material and human resources, and organizational structure, to perform its activities effectively, efficiently, reliably and prudently;
- (vi) Pay applicable fees;
- (vii) Not engage in any activity that may disrupt or interfere with the promotion of competition in the market;
- (viii) While performing its activities relating to competitive market operations, not engage in any activity that can impair its functioning as an independent and impartial market operator;
- (ix) Furnish to the Authority such information, documentation or data, and in such manner and time, as the Authority may require from time to time;

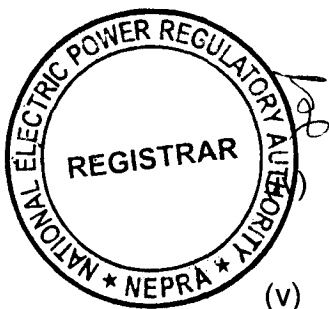


- (x) Submit progress reports to the Authority on the status of activities being undertaken and, where required by the Authority and applicable law, publish the required reports in the appropriate manner;
- (xi) Comply at all times with the directions and determinations made by the Authority;
- (xii) Comply with the Act, rules and regulations made in pursuance of the Act, applicable documents, the Commercial Code and the terms and conditions of this registration; and
- (xiii) Submit compliance reports in accordance with Article 12.2;

VI. Technical Obligations

6.1 During the term of this registration, the CPPA-G shall:

- (i) Facilitate the National Grid Company/System Operator in performance of its functions in accordance with law;
- (ii) Ensure that it organizes and develops the model for competitive market operations in consultation with the relevant stakeholders;
- (iii) Establish an efficient system of collecting, organizing and processing data sent by the National Grid Company/System Operator;
- (v) Implement the Market Rules; and
- (v) Keep records of contracts and contractual obligations executed and concluded between undertakings in accordance



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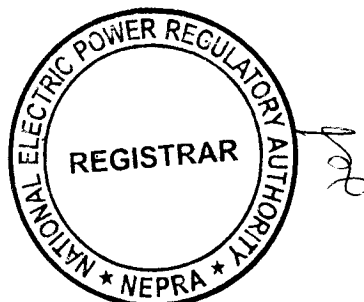
with the Market Rules, the Commercial Code, the terms and conditions of this registration and the directions of the Authority issued from time to time;

VII. Commercial Obligations

7.1 During the term of this registration, the CPPA-G shall:

- (i) Establish processes ensuring adherence of market participants to the Market Rules and to the Commercial Code;
- (ii) Manage the processes of financial settlement of energy sale transactions in accordance with the Commercial Code;
- (iii) Keep or cause to be kept separate accounts for the distinct market operator functions;
- (iv) Provide data to the Authority, as and when directed, relating to the generated and/or sold quantities of electricity as well as the amounts paid under power purchase contracts;
- (v) Provide information to the Authority, as and when directed, relating to executed power purchase contracts; and
- (vi) Submit to the Authority, as and when directed, correct and reliable information regarding prices, number of market participants, percentages of market share, forecasted prices and statistics;

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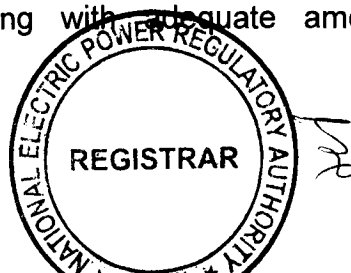


VIII. Procurement of Power on Behalf of Distribution Companies

- 8.1 Within a time period not exceeding one (01) month from the Date of Registration, the CPPA-G shall submit a comprehensive plan to the Authority for novation of power purchase contracts executed between the NTDC and an IPP or assigned/novated under the transmission licence of NTDC dated 2002;
- 8.2 Before the commencement of competitive market operations as prescribed in the Market Rules, the CPPA-G shall execute power purchase contracts in an objective, non-discriminatory and unbiased manner and at the price and rates, and on the terms and conditions, determined by the Authority;
- 8.3 The CPPA-G shall undertake procurement of power on behalf of DISCOs in accordance with this registration, the Act, the rules and regulations made thereunder, and the determinations, directions and orders of the Authority;
- 8.4 The terms and conditions of any power purchase contract to be executed by the CPPA-G shall be in conformity with the Commercial Code;
- 8.5 The foregoing terms and conditions shall be applicable to all power purchase contracts to be executed after the Date of Registration;

IX. Procurement of Power by Distribution Companies

- 9.1 Within a time period not exceeding three (03) months from the Date of Registration, the CPPA-G shall submit a comprehensive plan to the Authority, for its approval, for the implementation of the Single Buyer Plus Phase, along with adequate amendments to the

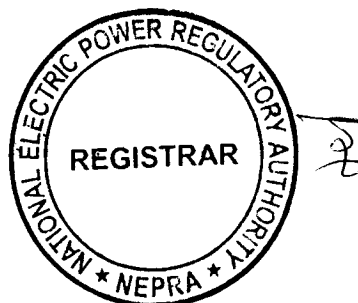


Commercial Code to cater for the Single Buyer Plus Phase including but not limited to provisions relating to the following:-

- (i) Settlement of imbalances in the case of bilateral contracts;
- (ii) Development of commercial standard operating procedures;
- (iii) Establishment of escrow accounts by DISCOs; and
- (iv) Reporting standards and requirements;

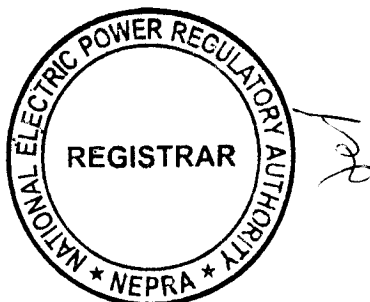
X. Development of Competitive Energy Market Frameworks

- 10.1 Before the commencement of competitive market operation as prescribed in the Market Rules, the CPPA-G shall remove any conflicts of interest that may impact its functioning as an independent and impartial Market Operator, including but not limited to segregation, bifurcation or removal of its power procurement and agency functions from other market operator functions;
- 10.2 Before the commencement of competitive market operation as prescribed in the Market Rules, the CPPA-G shall cease participation in any activity or function that may, directly or indirectly, compromise its objectivity, effectiveness, independence or impartiality as the Market Operator;
- 10.3 Within a time period not exceeding three (03) months from the Date of Registration, the CPPA-G shall submit a comprehensive plan to the Authority, for its approval, for the implementation of competitive market operations which shall include the following:-



- (i) A proposal for rationalization of power purchase contract tenures and a cut-off date after which the CPPA-G shall cease execution of long term power purchase contracts, other than those executed for maintenance of required load/demand; and
- (ii) Preparation of the model for competitive market operations by the CPPA-G to encompass the following:-
 - (a) Sale of power at wholesale and sale of power at retail, including but not limited to the development of a trading platform;
 - (b) Product development and evolution of market, including but not limited to development of frameworks for execution and trading of day-ahead spot contracts, base load contracts, peak load contracts, intraday spot contracts, physical forward contracts, futures and options;
 - (c) Restructuring of the CPPA-G to ensure objective, effective, independent and impartial execution of its market operator functions; and
 - (d) Conformity with the scheme, framework, terminology, nomenclature and principles prescribed by the Act, as amended from time to time;

10.4 Within a time period not exceeding three (03) months from the approval of the plan to be submitted under Article-10.3, the CPPA-G shall submit to the Authority for its approval adequate amendments to the Commercial Code for administering competitive market operations and shall include provisions catering for the features of the



competitive market operations model outlined in Article-10.3(ii) above;

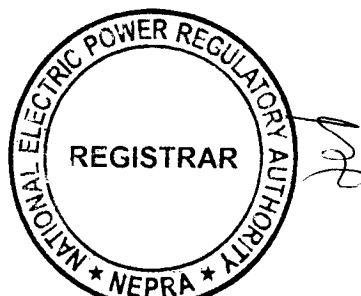
- 10.5 The CPPA-G shall ensure that the Commercial Code, or any amendment thereto, does not conflict or is inconsistent with the provisions of the Act, the rules and regulations made thereunder, or the Market Rules (as may be amended from time to time);
- 10.6 The CPPA-G shall ensure that it maintains adequate facilities and sufficient financial capacity, and complies with the capital adequacy requirements, as may be directed by the Authority from time to time to ensure efficient performance of the market operator functions and provision of services under the competitive market operations model as approved, and amended, by the Authority from time to time;
- 10.7 Within a time period not exceeding three (03) months from the Date of Registration, the CPPA-G shall comply with applicable corporate governance laws;

XI. Codes and Standards

- 11.1 In performing the market operator functions, the CPPA-G shall comply with all applicable codes, guidelines, directions and standards issued by the Authority from time to time;

XII. Compliance

- 12.1 This registration is granted subject to compliance and fulfillment of the terms and conditions contained herein;
- 12.2 The CPPA-G shall provide to the Authority, for its review, yearly reports relating to compliance with the terms and conditions of this registration;

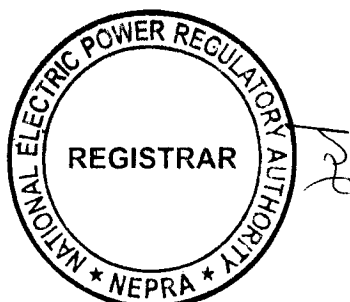


XIII. Fines and Penalties

13.1 Without prejudice and in addition to the powers of the Authority under the Act, and rules and regulations made thereunder, where the Authority determines that the CPPA-G is in violation of any applicable law or the terms and conditions of this registration, the Authority may:

- (i) Investigate the violation as per Section-27A of the Act;
- (ii) Order the CPPA-G to:
 - (a) Cease a specific activity; or
 - (b) Direct its external auditor to report directly to the Authority;
- (iii) Appoint and engage an external auditor to review the operations and compliance of CPPA-G with applicable law and this registration;
- (iv) Appoint an administrator to take over the operation of the market operator for such time or until such event as the Authority may approve; or
- (v) Increase the reporting requirements of CPPA-G on any matter related to its technical and financial performance or related to service quality;

13.2 Any contravention or non-compliance on part of the CPPA-G or any of its officers with respect to this registration, or the conditions and time limits prescribed herein, shall constitute grounds for penal action by the Authority;

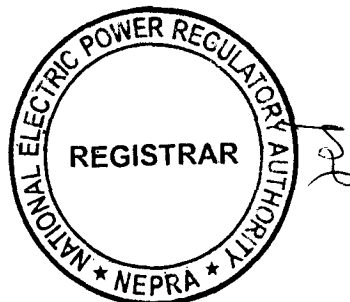


13.3 Any instrument, document, contract or agreement, or any part thereof, may be declared void if executed in contravention or non-compliance of this registration, the provisions of the Act, the rules and regulations made thereunder, or the Commercial Code (as amended and approved by the Authority from time to time);

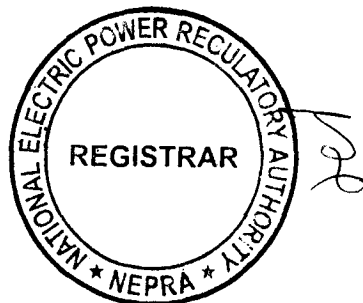
XIV. Settlement of Disputes

14.1 Any dispute arising out of or in relation to this registration or the activities performed by the CPPA-G in pursuance of this registration or the Market Rules shall be referred to the Authority for decision;

14.2 In case of a dispute relating to Article-8.2 of this registration, including but not limited to a dispute relating to contractual terms, rates and prices, non-price terms or undue delay or refusal on part of the CPPA-G in execution of contract, the matter shall be referred to the Authority for decision and shall *mutatis mutandis* be dealt with in accordance with the National Electric Power Regulatory Authority Complaint Handling and Dispute Resolution (Procedure) Rules, 2015;



Annexure-B



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COMMERCIAL CODE

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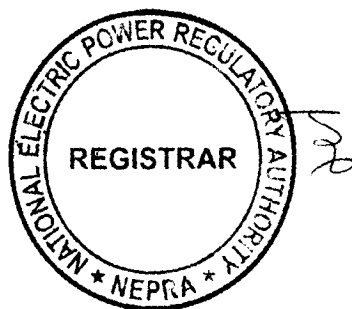
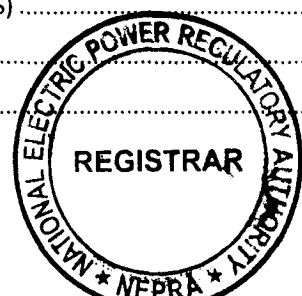


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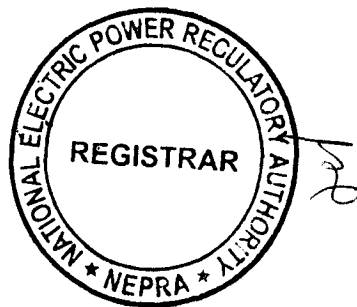


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SRO. 542 (I) 2015 In exercise of power conferred under section 35 of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 (XL of 1997) read with rule 5 of the National Electric Power Regulatory Authority (Market Operator, Registration, Standards and Procedure) Rules, 2015, the National Electric Power Regulatory Authority is pleased to approve the following Commercial Code submitted by the CPPA G:

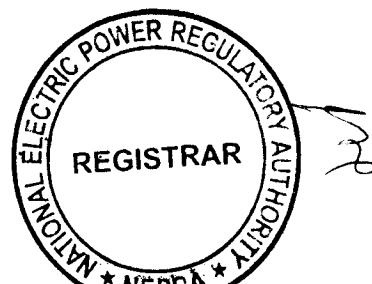
1. DEFINITIONS

1. "Act" means the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XI, of 1997);
2. "Authority" means the National Electric Power Regulatory Authority established under the Act;
3. "Back-up Metering System" means any meter and metering devices installed, owned and maintained by the Company engaged in generation or distribution of electric power, for backup purpose;
4. "Common Delivery Points (CDPs) "Connection Point" means metering locations on the NTDC Grid Network, which are between NTDC transmission system and Distribution Companies, or between NTDC or distribution companies system and power plants of generation companies. Energy transaction takes place at this point, energy transaction means electrical energy can be exported or imported from one party to another party, or injected to or extracted from the grid;
5. "Company" means a limited company incorporated under the laws of Pakistan;
6. "Commercial Meters" means Metering Systems installed at CDPs;
7. "Consolidated Escrow Account" has the meaning ascribed thereto in clause 8.3;
8. "CPPA-G" means the Central Power Purchasing Agency (Guaranteed) Limited;
9. "Dispute" means any dispute or disagreement or difference arising under this Commercial Code, or any provision hereof, or the obligations or performance of a Market Participant under any provision hereof;
10. "Date of Registration" means the date of issuance of registration under Rule 3 of the Market Rules;
11. "Distribution Company (DISCO)" means a market participant providing electricity distribution services other than K-Electric Limited;
12. "Escrow Account" means the bank account maintained by the Distribution Company pursuant to this Commercial Code for holding in escrow the revenues of the Distribution Company;
13. "Export/Back-Feed Energy" means measure of electrical energy transferred from grid to a power plant or complex of a generation company;
14. "Final Settlement Statement" has the meaning ascribed thereto in clause 8.6. and Annexure 4;
15. "GENCOs" means all electricity generating companies incorporated pursuant to unbundling of WAPDA and licensed to carry out generation functions by Authority;



16. "Generation Company" means a company with a generation license granted by Authority, including the GENCOs;
17. "GOP" means the Islamic Republic of Pakistan or the Government of Pakistan, as the context permits;
18. "Grid Code" means the regulations and procedures for the access, use and operation of NTDC transmission grids, as defined in NTDC Transmission License and approved by the Authority;
19. "Independent Power Producer (IPP)" means those IPPs established under (a) 1994 power policy or prior thereto (b) the 1995 Power Policy, (c) the 2002 Power Policy, (d) the 2006 Renewable Energy Policy and (e) the Power Generation Policy 2015;
20. "Market Operator" shall mean the CPPA-G as authorized or registered under the Market Rules;
21. "Market Participant" shall have the same meaning as assigned to it under the Market Rules;
22. "Market Participants Representing Demand" means the licensed ten Ex-WAPDA DISCOs which shall share the power pool as per the power pool allocation currently operated by system operator;
23. "Market Participants Representing Offer" means the Generation Companies licensed by the Authority having a PPA signed by, assigned to or administered by CPPA-G;
24. "Market Rules" means the National Electric Power Regulatory Authority (Market Operator, Registration, Standards and Procedures) Rules 2015;
25. "Metering System" means the devices that measure and record Active Energy (kWh), Reactive Energy (kVARh) and MIDI (kW). These systems may include any remote terminal units and an electronic data recording system;
26. "National Transmission and Despatch Company Limited (NTDC)" means the national grid company licensed by the Authority;
27. "power purchase contract" means an agreement for the procurement or purchase of electric power and shall include Power Purchase Agreements, Energy Purchase Agreements, agreements for import of power and agreements signed by WAPDA with an IPP under or prior to the 1994 Policy, signed by the NTDC (to procure power on behalf of Distribution Companies) with an IPP or signed by the NTDC with a GENCO or WAPDA Hydel;
28. "Power Purchase Agency Agreement (PPAA)" means the agreement between CPPA-G and each of the DISCOs, through which, inter alia, the DISCO shall appoint CPPA-G as its agent for the purposes set out therein;
29. "Preliminary Settlement Statement" has the meaning ascribed thereto in clause 8.5. and Annexure 4 of the Commercial Code;
30. "Settlement Committee" has the meaning ascribed thereto in the Standard Operating Procedures relating to the settlement billing & payment. The committee shall broadly comprise of representatives of CPPA-G and Market Participants.



31. "Standard Operating Procedure" means a specific procedure or set of procedures established for carrying out commercial operations, processes and functions as provided in this Commercial Code;
32. "System Operator "means the division of NTDC responsible for system operation and despatch as established in NTDC License and the Grid Code; and
33. "WAPDA" means the Pakistan Water and Power Development Authority established under the Pakistan Water and Power Development Authority Act, 1958 (W.P. Act XXXI of 1958).

The words and expressions used but not defined in this Commercial Code shall have the same meaning as are assigned to them in the Market Rules.

2. SCOPE AND APPLICABILITY

- 2.1. NTDC shall provide "Transmission Services (with its transmission assets) and system operation and dispatch services (through the System Operator) to all Market Participants, at use of system charges (UoSC) paid by the demand determined by Authority in NTDC Tariff Determinations. The CPPA-G will collect the UoSC from the Distribution Companies through the transfer price mechanism established by Authority and implemented by CPPA-G in accordance with this Commercial Code, and transfer the payment to NTDC as established in the settlement and payment code and procedures under Chapters 8 and 9 of this Commercial Code.
- 2.2 Nothing herein shall apply, or be deemed to apply, or be construed or interpreted in a manner which extinguishes, reduces, derogates from, is inconsistent or at variance with, or otherwise adversely affects, any rights, liabilities and terms set forth in any Implementation Agreement, power purchase contract, or in any licence of any licensee, executed or granted prior to the Date of Registration

3. GENERAL CONDITIONS

3.1. OBJECTIVE

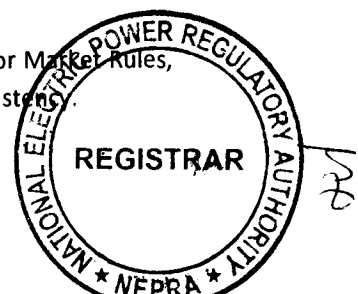
- 3.1.1. The general objectives of the Commercial Code are to establish, govern and promote efficient and transparent billing, collection, settlement and payment arrangements and procedures, centrally administered by CPPA-G, specifically of the commercial and financial transactions relating to the sale and purchase of electricity and capacity in the agreements signed by and the trading and pooling arrangement administered by CPPA-G, in the manner prescribed under or pursuant to the provisions of the Act and rules and regulatory framework;

3.2. RIGHT OF INTERPRETATION

- 3.2.1. The CPPA-G has the right of interpreting this commercial Code as is most appropriate, provided that the CPPA-G shall be under the obligation to inform this interpretation and its justification to Authority and publish the interpretation on its website. Once an interpretation is agreed upon or approved by Authority, the CPPA-G shall draft an amendment or update the necessary commercial Standard Operating Procedures and shall publish on its website and 'inform the Market Participants accordingly.

3.3. INTERPRETATION

- 3.3.1. In the case of any inconsistency or contradiction of the Commercial Code with the Act or Market Rules, the provisions of the Act or Market Rules will prevail up to the extent of the inconsistency.



3.3.2. This Commercial Code complements the Grid Code and should be read in conjunction therewith.

3.4. PROCEDURE FOR PROPOSING AMENDMENTS

3.4.1. CPPA-G shall establish a Commercial Code Review Panel in order to seek assistance in the improvement of the Commercial Code. This Review Panel shall include representatives of Market Participants and staff of the System Operator (NTDC) and will be chaired by CPPA-G.

3.4.2. The Review Panel may propose:

- (i) Amendments to the Commercial Code, based on principles, objectives and purposes laid down in the Market Rules and with adequate justification, including expected impact; and
- (ii) New or amendment to existing commercial Standard Operating Procedures for implementation of the Commercial Code and the Market Rules, with explanation and justification;

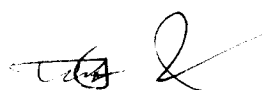
3.4.3. The System Operator, a Market Participant, or any other interested party may file a written request to the CPPA-G proposing amendments to the Commercial Code, with the corresponding justification and assessment of expected impact and benefits. The CPPA-G shall respond by giving a written notice to the party who made the submission and publish the same on CPPA G website for consultation inviting comments from all Market Participants and any other interested persons.

3.4.4. If deemed necessary, CPPA-G or the Commercial Code Review Panel, if established, shall hold meetings with the party who made the amendment proposal, Market Participants and any other interested party who filed written comments. The CPPA-G or the Commercial Code Review Panel if implemented, shall review proposed amendments and, if considered reasonable and justified, submit a written report to Authority indicating the amendments proposed, and the reasons for its recommendations. On approval of the Authority, the Commercial Code shall accordingly be amended and thereafter notified by the Authority.

3.4.5. The CPPA-G shall prepare an Annual Report entailing the problems experienced during the implementation and application of the Commercial Code and the commercial Standard Operating Procedures, and achievement of its purpose, and describing amendment made to the Commercial Code or under consideration. This report shall be submitted by the CPPA-G to Authority and uploaded on the CPPA-G website for comments by all stakeholders.

3.4.6. The Annual Report shall include but not be limited to the following:

- (i) Problems identified in the implementation and manner of addressing the same, including any new interpretations of the provisions of the Commercial Code made by CPPA-G;
- (ii) Conflicts of interpretation with Market Participants or the NTDC;
- (iii) Any transitional exception in complying with this Commercial Code or its procedures (in case it is granted to any Market Participant subject to prior approval from Authority and consistency with signed legal agreements with the Market Participants); and



- (iv) Actions and plans for improving the performance, transparency, feasible implementation or efficiency and achieve the objectives of the Commercial Code and Market Rules, and to transition to competitive electricity market.

3.4.7. A proposal for amendment may be rejected (b), Authority or CPPA-G or the Commercial Code Review Panel, if established) if the proposal is found to:

- (i) Unfairly discriminate against a Market Participant or class of Market Participants;
- (ii) Limit the development of competition, or prevent free entry into the electricity market;
- (iii) Allow one or more Market Participants to possess market power, or have a potential for abuse of market power; and
- (iv) Be inconsistent with the objectives and purpose defined for the Commercial Code and the Market Rules, or inconsistent with Act or regulatory framework.

4. MARKET PARTICIPATION & TERMINATION

4.1. MARKET PARTICIPANTS ELIGIBILITY REQUIREMENTS

4.1.1. A future Market Participant shall be liable to fulfil the following requirements. The person:

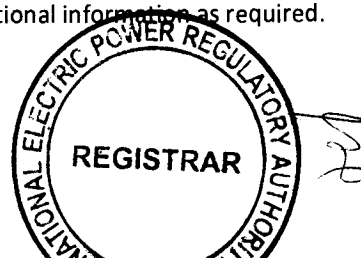
- (i) has been granted a distribution or generation license by the Authority;
- (ii) is an authorized company from another country that participates in regional international power trade through a contract with or novated to or administered by and
- (iii) has a Commercial Metering System at each Common Delivery Point, as established in the Grid Code and defined in relevant clauses of the concerned power purchase contract and this Commercial Code.

4.1.2. CPPA-G shall make publicly available the list of all Market Participants on its official website, as updated from time to time.

4.1.3. The Market participants shall provide CPPA-G the following information:

- (i) Each Distribution Company with respect to details of bank account-under the pre-existing payment arrangements with NTDC/CPA and the information will be provided to CPPA-G by NTDC before the start of the market commercial operation.
- (ii) The Generation Company with respect to details of the bank account it has to open and maintain, except for pre-existing Generation Companies that will continue with the same payment arrangements and the information will be provided to CPPA-G by NTDC before the start of the market commercial operation.

4.1.4. The CPPA-G shall request from a Market Participant any additional information as required.



4.1.5. New generation companies or power plants for sales to all DISCOS through CPPA-G will sign a power purchase contract with CPPA-G, where CPPA-G procures power on Disco's behalf.

4.2. MAINTENANCE OF MARKET PARTICIPANT & CONTRACTS INFORMATION

4.2.1. The CPPA G shall organize, maintain and publish on CPPA-G website information regarding the register of Market Participants and with details of entities with whom memorandum of understanding (MOU) are in place or power purchase contracts are being negotiated by CPPA-G to procure power on behalf of DISCOs.

4.2.2. The CPPA-G shall also maintain a contract register. It shall record in this register all legal agreements existing between CPPA-G and the Market Participants or power purchase contracts being administered by CPPA-G. The list of such legal agreements shall be publicly available on the CPPA-G official website.

4.3. WITHDRAWAL OF MARKET PARTICIPANT

4.3.1. The participation of a Market Participant will end only under the following conditions:

- (i) For a generator, participation can only end if its power purchase contract expires or end due to default ending up in termination; and
- (ii) For a distribution company, participation is subject only to provisions in PPAA: while the agency agreement remains valid and effective, participation cannot end.

4.3.2. Notwithstanding the above, the Market Participant shall remain liable for all its obligations and liabilities as a Market Participant that incurred or arose prior to the date of withdrawal.

5. CPPA-G FUNCTIONS

5.1. RESPONSIBILITY FOR COMMERCIAL CODE

5.1.1. CPPA-G is responsible for the administration, maintenance and implementation of the Commercial Code, supervision of compliance by Market Participants and performance of such functions as provided for in Schedule II of the Market Rules and the registration granted under Rule 3 of the Market Rules.

5.2. LEGAL CAPACITY

5.2.1. CPPA-G has entered into back-to-back arrangements with NTDC to ensure that, following the transfer of business from NTDC to CPPA-G, the functions and obligations to be performed by NTDC or WAPDA under power purchase contracts signed by NTDC or WAPDA, will continue to be assumed and exercised by NTDC as per its transmission licence and the Grid Code, while CPPA-G will assume and exercise the functions assigned to it under the Market Rules, this Code and the agency agreements signed between CPPA-G and DISCOs. CPPA-G has, through back-to-back arrangements with NTDC/WAPDA, the power to succeed to all the other rights and obligations of NTDC/WAPDA under all existing power purchase contracts upon execution of appropriate contractual instruments between the relevant contracting parties to those instruments.

5.2.2. With respect to all power purchase contracts signed or to be signed by CPPA-G, until the relevant concession documents and the power policy are revised and approved by the competent authorities to provide for the new arrangements between CPPA-G, NTDC, power generation companies, WPPs and



GENCOs) and GOP, CPPA-G shall be deemed to have the legal capacity and all required consents, licences, authorisations, approvals and permissions to enter into, execute and perform its obligations under the concerned power purchase contracts and, where necessary, other related agreements. CPPA-G has entered into back-to-back arrangements with NTDC, to ensure that the functions and obligations of NTDC which are within its powers, as conferred by NTDC's transmission licence, are assumed and exercised by NTDC with respect to such power purchase contracts.

6. COMMERCIAL TRANSACTIONS

6.1. COMMERCIAL TRANSACTIONS AND TRANSFER PRICE

- 6.1.1. The invoices for energy and capacity sold by generation companies, for each billing period, shall be sent to CPPA-G. The mechanism for the energy and capacity invoicing for Generation Companies is detailed in Annexure 1.
- 6.1.2. For each billing period, CPPA-G shall calculate the capacity transfer rate and energy transfer rate, in accordance with the Authority approved Transfer Pricing Mechanism, for the purposes of invoices against each Distribution Company for the energy and capacity purchased during the previous month.
- 6.1.3. The Transfer Pricing Mechanism is used to derive the formula for Transfer Price, which is then incorporated into the invoices raised against each Market Participants Representing Demand. This formula is as below:

$$TP = TC + UoSC + GST$$

Where,

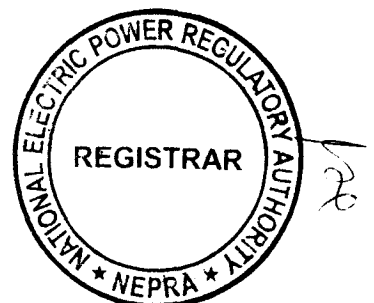
- TP = Transfer Price in PKR
- TC = Transfer Charges for generation costs of the pool
- UoSC = Use of System Charges in PKR
- GST = Application of GST on ETC 1 in PKR

- 6.1.4. Initially, the Use of System Charge (UoSC) in the Transfer Price consists of both, the transmission charges of NTDC as well as the costs incurred by CPPA-G for its functions, as included in Authority determination for NTDC. Once a new NTDC tariff determination after the start of this Commercial Code and CPPA-G becomes operational, the UoSC will only constitute of the transmission charges of NTDC whereas the costs incurred by CPPA-G – to be referred to as the 'Market Operation fee' – shall be charged separately to Market Participants Representing Demand. The incorporation of this distinction between transmission charges and the Market Operation fee will modify the formula for calculating "Transfer Price as found below:

$$TP = TC + UoSC + MOF + GST$$

Where,

- TP = Transfer Price in PKR
- TC = Transfer Charges for generation costs of the pool



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UoSC	=	Use of System Charges of NTDC in PKR
MOIL	=	Market Operation face of CPPA-G in PKR
GST	=	Application of GST on ETC 1 in PKR

Each of the above terms in the formula has the meaning and is calculated as follows.

(i) **Transfer Charges (TC)**

Total transfer charges are calculated by adding Capacity Transfer Charge and Energy Transfer Charge from generation in accordance with generator validated invoices and power purchase contracts.

$$TC = CTC + ETC$$

Where,

TC	=	Transfer Charges in PKR
CTC	=	Capacity Transfer Charge in PKR
ETC	=	Energy Transfer Charge in PKR

The Transfer Charge is applied on Market Participants Representing Demand for recovery of cost for procuring power from Generation Companies in accordance with power purchase contracts. A Transfer Rate ('FR), applicable to Monthly Maximum Demand (MDI) and consumption of energy, applies to the above charges as follows:

- ETR = Energy Transfer Rate to Market Participants Representing Demand in PKR per kWh per Month
- CTR = Capacity Transfer Rate to Market Participants Representing Demand in PKR per kW (MDI) per Month

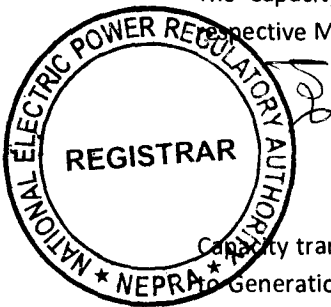
CPPA-G shall use the Authority-approved mechanism for calculating monthly values of TR. The Transfer Rates shall be used to calculate CTC and ETC as follows:

(a) **Capacity Transfer Charge (CTC)**

The Capacity Transfer Charge (CTC) is calculated as CTR and multiplied by the monthly MDI of each respective Market Participant Representing Demand as below:

$$CTC = CTR \times MDI_{\text{Market Participant Representing Demand}}$$

Capacity transfer Rate (CTR) is applied to Market Participants Representing Demand to recover payments to Generation Companies for Capacity Payments. CTR is calculated by adding Capacity Generation costs (as invoiced by Generation Companies and verified by CPPA-G) of all generation companies for each billing month and subtracting sum of Liquidated Damages payable by generation companies for the same billing month. The result of which is further divided by the sum of Maximum Demand (MDI) recorded at all CDPs for each billing month.



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$$\text{CTR} = \frac{\Sigma(\text{CpGenCap} - \text{LD})}{\Sigma \text{MD}}$$

Where,

- CpGenCap = Generation companies cost for Capacity component of electrical power generation for a billing month in PKR
 LD. = liquidated Damages payment by Generation companies in PKR
 MD = Maximum Demand of DISCOs in a billing month in kW

(b) Energy Transfer Charge (ETC)

The Energy Transfer Charge (ETC) consists of two components:

$$\text{ETC} = \text{ETC1} + \text{ETC2}$$

Where,

- ETC 1 = Energy Transfer Charge that is chargeable to GST
 ETC 2 = Energy Transfer Charge that is not chargeable to GST

ETC 1 and ETC 2 are calculated by multiplying the Energy Transfer Rate (ETR) with energy units of each Market Participant Representing Demand (in kWh) as follows:

$$\text{ETC 1} = \text{ETR 1} \times \text{Market Participant Representing Demand}_{\text{EU}}$$

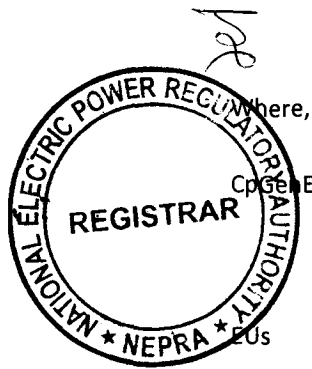
$$\text{ETC 2} = \text{ETR 2} \times \text{Market Participant Representing Demand}_{\text{EU}}$$

The ETR is applied on DISCOs for recovery of energy costs of the Generation Companies, and is calculated by taking sum of Energy Generation costs (as invoiced by the Generation Company and verified by CPPA-G) of all Generation Companies for each billing month and dividing it by the sum of energy units recorded at CDPs of each DISCO for the respective billing month as below:

$$\text{ETR} = \frac{\Sigma \text{CpGenEn}}{\Sigma \text{EUs}}$$

Where,

- CpGenEn = Generation companies cost for Energy component of electrical power generation for a billing month in PKR (subject to deduction of Total Export Energy Payments¹ payable by the generation companies for the energy imported)
 EUs = Energy Units recorded at CDPs of Market Participant Representing Demand during each billing month in kWh



¹ Total Export Energy Payments (FEP) is the payment made for energy imported by Generation Companies from the grid. A detailed overview and mechanism of Export Energy payments is given in Annexure 2

CPPA-G shall be provided with all the Metering Data collected from CDPs of respective Market Participants Representing Demand by NTDC and shall calculate Net Energy Units transferred/delivered to each Market Participant Representing Demand. Each energy unit is measured in kWh. Net Energy Delivered to a Market Participant Representing Demand is calculated by taking the difference of total Energy imported from Market Participant Representing Demand and total Energy exported to Market Participant Representing Demand.

Monthly Maximum Demand (MDI) or Peak Demand of each Market Participant Representing Demand is also recorded at CDPs, and net MDI is reflected in the bills generated by CPPA-G to DISCOS. It is measured in kW. With reference to Market Participant Representing Demand, Net MDI is calculated by taking the difference of total Market Participant Representing Demand Imported MDI and total Market Participant Representing Demand Exported MDI.

(c) Use of System Charge (UoSC)

NTDC levies two types of wheeling/use of system charge (UoSC) to Market Participants Representing Demand in accordance with Authority determination;

- Fixed Charge (USCF) and;
- Variable Charge (USCV).

The charges resulting from the latest Authority determination apply to all Market Participant Representing Demand. UoSC is calculated as follows:

$$\text{UoSC} = \text{USCF} + \text{USCV}$$

Where,

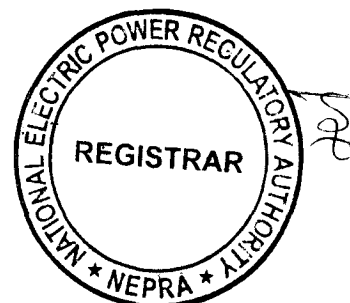
USCF = Fixed Use of System Charges
USCV = Variable use of System Charges

Fixed charges are applicable on the Maximum Demand Indicator (MDI) value (in kW) and Variable charges are applicable on energy transferred to Market Participant Representing Demand (in kWh) during a billing period. Variable Charges are not applied to Market Participant Representing Demand as per latest Authority determination, but should this be modified in later determinations, the formula will include USCV.

(d) Market Operation Fee of CPPA-G (MOF)

The formula for calculation of the Market Operation Fee for CPPA-G is as established in clause 11.1.4 of this Commercial Code.

(e) General Sales Tax (GST)



GST is applied on the Energy payments that are chargeable to GST (ETC 1) whereas, there no CST is applied to ETC 2 (it includes payments items excluded from GST application in accordance with order issued by FBR from time to time, e.g. markups, supplemental tariffs, etc.).

7. COMMERCIAL METERING SYSTEM

7.1. METER READING AND DATA COLLECTION

7.1.1. Verification of meter readings shall take place under NTDC standard operating procedures in accordance with Grid Code, and is a responsibility of NTDC.

7.1.2. NTDC shall provide CPPA-G the information of installed metering systems, commissioning and testing.

7.1.3. All capacity and energy used for market settlement shall be measured through the Commercial Metering System. Collection and validation of metering data for the existing Common Delivery Points shall be carried out on a monthly basis by the NTDC, on the last business day of each month and shall be performed for Generation Companies by the Meter Reading Committee appointed by NTDC in accordance with PPAs.

7.1.4. NTDC will provide CPPA-G the data and information resulting from monthly Meter Reading.

7.1.5. If during the validation process, a metering problem or a failure is identified in a Main Meter, the CPPA-G shall use as commercial data the following:

- (i) if the Connection Point has a back-up meter, the data metered by the back-up meter shall be used; and
- (ii) if the Connection Point does not have back-up meter, the energy calculated with the hourly reading by the System Operator shall be used

7.1.6. The CPPA-G shall inform, in the Settlement Documents, of any problems, errors or failures detected and the replacement data used to calculate the energy for the Settlement Statement.

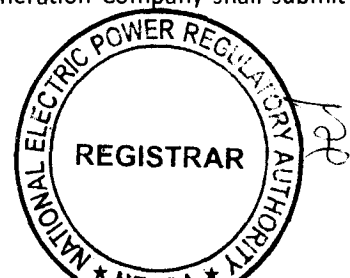
8. SETTLEMENT & BILLING

8.1. INITIAL SETTLEMENT AND BILLING PROCEDURES

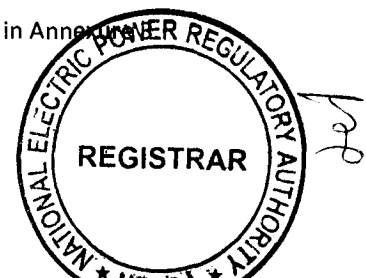
8.1.1. The CPPA-G shall follow the procedures for settlement and billing provided under this clause 8.1 till three months after the Date of Registration, after which the procedures prescribed in clauses 8.2 to 8.8 shall be followed.

8.1.2. The CPPA-G will use the same nature of banks as used by the CPPA of NTDC till the Date of Registration or till Distribution Companies have established Escrow Accounts as per clauses 8.2 to 8.8 herein, whichever is earlier.

8.1.3. Within the number of working days as provided in the power purchase contract for meter reading at the CDPs which occurs on the last working day of each month, each Generation Company shall submit an invoice to the CPPA-G as per its power purchase contract.



- 8.1.4. Within two (2) working days after the end of each month, NTDC shall send to CPPA-G the data and information from the CDP meter reading. CPPA-G and NTDC will agree the format to exchange this information electronically.
- 8.1.5. On a weekly basis, and not later than (Tuesday morning) the System Operator shall send to CPPA-G the declared and available capacity of generation, energy despatched and compliance with despatch instructions by each power plant or generator, as applicable in the power purchase contract. CPPA-G and the System Operator will agree on the format of exchanging this information electronically.
- 8.1.6. Based on meter reading and information sharing described in Section 12, the CPPA-G will calculate the UoS for each DISCO.
- 8.1.7. CPPA-G shall verify the invoices sent by Generation Companies in accordance with its power purchase contract.
- 8.1.8. Within five (5) working days after completing verification of receipt of invoices from Generation Companies, the CPPA-G shall calculate the transfer charges and issue invoices for the previous month to each Distribution Company, indicating each of the charges and the total that the Distribution Company shall be liable to pay.
- 8.1.9. DISCOs shall send a Revenue Collection & Remittance Statement to CPPA-G. The Revenue Collection & Remittance Statement shall include the daily remittances from DISCOs to and the amount retained by DISCOs for its own expenditures.
- CPPA-G shall prepare a daily Subsidy Collection Report based on the subsidy or disbursement received from or provided by the Federal Government against the subsidy invoices raised by the Distribution Companies.
- 8.1.10. The banks associated with CPPA-G shall daily send a computer generated bank statement to the CPPA-G.
- 8.1.11. CPPA-G shall prepare a daily Cash Collection Report based on the Revenue Collection & Remittance Statement sent by DISCOs and the available balance in each of the bank accounts associated with CPPA-G. This Report shall contain data regarding collections from each DISCO for said day and the day before, balance remaining in each associated bank to date, total collections to date and the net available balance to date.
- 8.1.12. CPPA-G shall prepare a pending Liabilities Report on a daily basis to summarize the outstanding payments due to NTDC and generation companies or the outstanding liabilities of CPPA-G's principals, the Distribution Companies.
- 8.1.13. Based on the daily Cash Collection Report, daily Subsidy Collection Report and the daily Pending Liabilities Report, CPPA-G shall form a Settlement Committee that shall be responsible for the preparation of Daily Payment Instructions for the payments that are to be made to the relevant Market participants.
- 8.1.14. Based on monthly basis, CPPA-G shall prepare a DISCO-wise Subsidy Allocation Statement and shall issue a credit memo and adjust the same against energy receivables balance of Distribution Companies.
- 8.1.16. A detailed overview of the initial settlement and billing procedures is given in Annex 4.



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8.2. NEW SETTLEMENT AND BILLING PROCEDURES

8.2.1. The CPPA-G shall draft commercial Standard Operating Procedures for settlement and billing, corresponding to this clause 8.2, and approve the same after consultation, within 3 months from the Date of Registration. The Standard Operating Procedures shall incorporate the following:

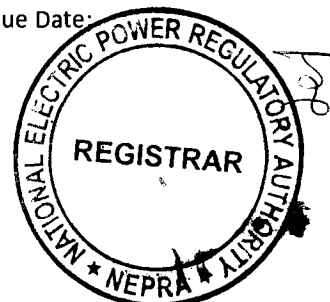
- (i) The Distribution Companies shall have an Escrow Account and deposit all collections in their Escrow Accounts, which shall include end-consumer payments for electricity tariff regardless of their origin;
- (ii) Any subsidy or disbursement, received from or provided by the Federal Government against the invoices raised by the Distribution Companies, shall also be deposited in the Escrow Account;
- (iii) At the end of each week (or daily as will be specified in the corresponding commercial Standard Operating Procedure), the banks in which the Distribution Companies have their Escrow Accounts shall disburse to each Distribution Company an amount equal to a pre-definite percentage of all the deposits made in the account during the previous week. This percentage, which may be different for each Distribution Company, shall be determined as established in the corresponding commercial Standard Operating Procedure approved by Authority at the beginning of each fiscal year;
- (iv) The pre-defined percentage of all deposits made into a Distribution Company's Escrow Accounts shall be based on information provided by CPPA-G, estimated using the following formula as:

$$\%back = D.M. \% * Factor$$

Where,

- % back = Percentage of all deposits made in the Escrow Account during the previous week (or period specified in the corresponding commercial Standard Operating procedures) that shall be returned to the Distribution Company.
- D.M. = Distribution Margin in latest Authority determination for the DISCO multiplied by the percentage of billing collected / collection efficiency.
- Factor = Factor to be established in accordance with the corresponding commercial Standard Operating procedure approved by Authority at the beginning of each fiscal year, which shall be not less than 0.6 and not greater than 0.8.

- (v) After the CPPA-G issues the Final Settlement Statement, and before the Payment Due Date stated in such Settlement Statement, as described in the Settlement and Payment Sections of this Commercial Code, each Distribution Company shall determine if there are enough funds in its Escrow Account to afford the required payment, and, in case the remaining funds are found insufficient, the Distribution Company shall be responsible for depositing the required difference;
- (vi) Whenever the remaining funds in an Escrow Account are found insufficient before the Payment Due Date, the affected Distribution Company shall be responsible for depositing the required difference either before the Payment Due Date or before the next Payment Due Date:

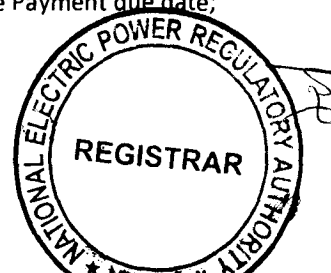


- (vii) At the Payment Date, the banks in which the Distribution Companies have their Escrow Accounts shall execute the irrevocable mandate and transfer to the CPPA-G Consolidated Account the amounts stated in the Final Settlement Statement of each Distribution Company that has sufficient funds in its Escrow Account to pay in full the amount indicated in the Final Settlement Statement;
- (viii) After the banks have executed the irrevocable mandates transferring to the CPPA-G the amounts indicated in the Final Settlement Statements, any amount remaining in any of the Distribution Company's Escrow Accounts shall be refunded to the corresponding Distribution Company;
- (ix) When the funds in an Escrow Account of a Distribution Company are deemed to be insufficient for payment of the Final Settlement Statement on the Payment Due Date the bank shall execute its irrevocable mandate transferring to the CPPA-G Consolidated Account all the funds that exist in the Escrow Account at that moment;
- (x) When the funds in an Escrow Account of a Distribution Company are deemed to be insufficient for payment of the Final Settlement Statement on the Payment Due Date, and when the affected Distribution Company is not able to resolve the insufficient funds in its Escrow Account by the Payment Due Date, the allocation of electric power to said Distribution Company shall be reduced temporarily during the next settlement period (i.e. next month) in accordance with the energy pool allocation policy and to distribute the temporary reduction of allocated electricity in a manner that shall maintain and may increase the total monthly collections of said Distribution Company; and when the next month in accordance with the allocation policy for reduction of electricity to a Distribution Company in the settlement period (i.e. next month) does not result in sufficient collections to satisfy that settlement-period's Final Settlement Statement and remove the settlement deficit with respect to the prior settlement period (i.e. the immediately prior month) Authority upon request by the CPPA-G shall order a temporary reduction in the percentage of all deposits made in the Escrow Account that are returned to said Distribution Company until all outstanding deficits are removed from said Distribution Company's accounts payable.

8.2.3. The above procedure has the following characteristics:

- (i) Each week, each Distribution Company will receive a percentage of its total deposits (i.e. rebated deposits) in their Escrow Accounts including any disbursement from the Federal Government. The rebated deposits are to be used by the Distribution Companies to run its normal operations;
- (ii) The rebated deposits are received by the Distribution Company either each week or in a number of days less than seven (7) days;
- (iii) The rebated deposits are related to the Distribution Margin determined by Authority;
- (iv) Authority will determine the rebated deposits for each Distribution Company at the beginning of each financial year;
- (v) The rebated deposits from the Distribution company's ESCROW Account will not equal the Distribution Company's Distribution Margin;
- (vi) The rebated deposits will be associated with a greater assurance that the Distribution Company will be able to satisfy the Final Settlement Statement in full and by the Payment due date;





- (vii) The rebated deposits ensure that a percentage of all deposits remain in the Escrow Account until the payment Due Date;
- (viii) The rebated deposits may be reduced temporarily during the financial year by order of Authority;
- (ix) The allocation of electricity to the Distribution Company may be reduced temporarily during the financial year in furtherance of the power allocation policy;
- (x) After a Final Settlement Statement is received by a Distribution Company, the pertinent banks that administer said Distribution Company's Escrow Account will produce a "balance" representing the amount of funds in said Escrow Accounts:
 - a) If enough funds are not in said Escrow Accounts to pay the CPPA-G bill in full by the Payment Due Date, the Distribution Company is liable for removing the deficit in accordance with this Commercial Code; and
 - b) If enough funds are in said Escrow Accounts for paying the CPPA-G bill in full by the Payment Due Date, the surplus in the Escrow Account will be returned to the Distribution Company.

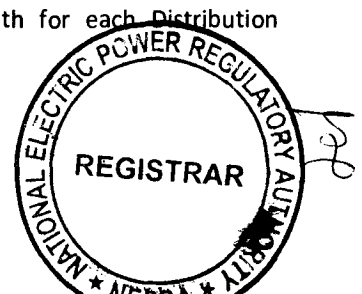
8.3. DETERMINATION OF THE MAGNITUDE AND CHARACTERISTICS OF THE 'ESCROW ACCOUNT'

8.3.1. Within three (3) months before the beginning of each financial year, the CPPA-G shall estimate the amounts (expressed in Rupees) to be deposited into the Escrow Account for each Distribution Company.

8.3.2. Within three (3) months before the beginning of each financial year, the CPPA-C shall estimate the percentage to be withdrawn from the Escrow Accounts for each particular Distribution Company.

8.3.3. To finalize said estimated amount to be deposited in Escrow Accounts, the CPPA-G shall:

- (i) Estimate the amounts to be paid, by each Distribution Company at each month, for power purchases and NTDC UoS using inputs from the Year Ahead Plan produced by the System Operator, per the Authority Guidelines for the Determination of Consumer-end Tariff (methodology and procedures) 2015, and shared with CPPA-G (detailed in Section 12 of this Commercial Code) and/or assumptions and power purchase prices in Authority determination for DISCOs;
- (ii) Estimate the revenues for each Distribution Company at each month using the most recent version available of the tariff determinations for each of the Distribution Companies;
- (iii) Estimate the Distribution Margin for each Distribution Company, subtracting from estimated revenues the estimated total cost of power purchase, which is based on the price of generation, NTDC charges and the CPPA-G Market Operation fee.
- (iv) Determine the percentage of the Distribution Margin estimate to be returned to the Distribution Company for its operations, which may be determined jointly by CPPAG and Authority.
- (v) The aforementioned estimates so determined, expressed in Rs/month for each Distribution Company, shall be presented to the CPPA-G Board for its approval.



- (vi) After approval by the CPPA-G Board, the corresponding estimated amounts shall constitute the CPPA-G's estimated monthly settlements, following the procedures expressed in Section 8 of this Commercial Code.

8.4. MARKET SETTLEMENT SYSTEM

8.4.1. CPPA-G shall administer monthly a Market Settlement System.

8.4.2. CPPA-G shall be responsible for the development and maintenance of the required software and data for the operation of the Market Settlement System.

8.4.3. CPPA-G shall be responsible for verification of data and the accuracy of the outputs of the Market Settlement System.

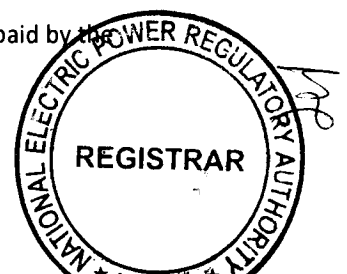
8.4.4. The Market Settlement System shall be administered by CPPA-G through the following procedure:

- (i) Calculate the settlement of PPAs and generation charges;
- (ii) Calculate the settlement of NTDC Use of System Charges (UOS.);
- (iii) Calculate the CPPA-G Market Operation fee which shall be shared among the Distribution Companies on the basis of the energy (measured in kWh) delivered.
- (iv) Calculate the actual deficit or surplus with respect to the Distribution Companies' Escrow Accounts for payments at the Payment Due Date after the full or partial payment by the Distribution Company of its Final Settlement Statement.

8.4.5. The Market Transaction of a Market Participant for a month shall be calculated as follows:

- (i) The actual amount of the monthly Final Settlement Statement received by the Market Participant; plus
- (ii) The actual amount payable to the Market Participant due to corrections to the Market Transactions of previous Final Settlement Statements; plus
- (iii) The actual amount payable to the Market Participant corresponding to accrued interest for previous payments not received on time; minus
- (iv) The actual amounts payable to the Distribution Company due to corrections to the Market Transactions of previous Final Settlement Statements; minus
- (v) The actual amount payable to the Distribution Company corresponding to corrections to the Market Transactions of previous Final Settlement Statements; plus
- (vi) The actual deficit in the Escrow Account of the Distribution Company to be paid to CPPA-G; minus
- (vii) The actual surplus in the Escrow Account to be returned back to the Distribution Company.

8.4.6. The CPPA-G shall determine the monthly NTDC Use of System Charge (UoSC) to be paid by the Distribution Companies by:



- (i) Calculating the NTDC UoS for the month pertaining to the Final Settlement Statement; adding or subtracting as the case may be;
- (ii) The corrections to previous NTDC UoS payments by the Distribution Company.

8.4.7. CPPA-G shall calculate the monthly UoS utilizing the formulas and procedures established by Authority in the latest notified NTDC tariff determination.

8.4.8. CPPA-G shall calculate the CPPA-G Market Operation fee as described in Section 11 of this Commercial Code.

8.5. PRELIMINARY SETTLEMENT STATEMENT

8.5.1. Within ten (10) working days of the beginning of each month, the CPPA-G shall send to each Market Participant, a Preliminary Settlement Statement, through electronic mail. This preliminary settlement statement shall include:

- (i) For generations, the net energy and, when applicable, generation capacity bought or sold in accordance to invoice and each power purchase contract, and total for the Participant generator;
- (ii) For Distribution Companies, NTDC Use of System Charge, net energy bought and the demand, and the CPPA-G Market Operation Fee;
- (iii) The amounts to be deposited in the Distribution Company's Escrow Account or withdrawn from it, and
- (iv) The payable or accrued interest for previous payments not made on time.

8.5.2. When a participant claims an error or discrepancy exists within the Preliminary Settlement Statement, the Market Participant shall convey its claim to the CPPA-G within five (5) working days after receiving the Preliminary Settlement Statement.

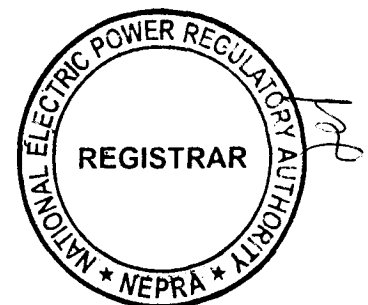
8.5.3. The CPPA-G shall review the preliminary Settlement Statement and conclude whether the Market Participant's claim pertaining to an error or discrepancy is correct or incorrect before the Final Settlement Statement is released to Market Participants.

8.5.4. The CPPA-G shall notify affected Market Participants of the claimed error or discrepancy in the Preliminary Settlement Statement and whether or not the claimed error or discrepancy will be corrected in the Final Settlement Statement.

8.6. FINAL SETTLEMENT STATEMENT

8.6.1. Within twenty (20) working days after the beginning of each month, the CPPA-G shall send the Final Settlement Statement to each Market Participant, using a format similar to the Preliminary Settlement Statement.

8.7. COMPLAINTS ON THE FINAL SETTLEMENT STATEMENT



8.7.1. A Market Participant may challenge the Final Settlement Statement with a valid justification within sixty (60) working days after its receipt. This complaint may relate to:

- (i) The registered quantities, or
- (ii) The settlement amounts, either in Market transactions, N1 DC Use of System charges, CPPA-G Market Operation Fee, interest charges for late payments or deposits/withdrawals from the Escrow Accounts.

8.7.2. The CPPA-G and the Market Participant shall use reasonable endeavours to resolve the complaint within fifteen (15) working days after the complaint is submitted to the CPPA-G. If the CPPA-G and the Market Participant do not resolve the complaint to their mutual satisfaction, the CPPA-G and the Market participant shall use the dispute resolution mechanism in accordance with the Market Rules.

8.7.3. When the Market Participant and the CPPA-G resolve the complaint in a manner that causes the mutually agreed upon settlement amount to differ from the Final Settlement Statement, the CPPA-G shall include the correction in the Final Settlement Statement of the month after the complaint has been resolved.

8.7.4. In the case of emergencies and/or failure of the settlement system, the CPPA-G may issue an Estimated Settlement Statement and/or modify the schedule for issuing Preliminary Settlement Statements and/or Final Settlement Statements. In such cases, the CPPA-G shall inform all Market Participants the temporary procedural changes as soon as practicable (detailed in Section 12).

8.8. INVOICING

8.8.1. Within 5 working days after the Final Settlement Statement:

- (i) Issue the invoice for the previous month for the Distribution Companies, indicating the charge that each shall pay. This amount will be coincident with the final Settlement Statement, which at the same time will act as a description of the detailed calculations.
- (ii) Each Generation Company shall submit an invoice as per its power purchase contract with or novated to or administered by CPPA-G for the previous month indicating the payment due to each Generation Company. This invoice shall include the data and description of the details of calculations.

8.8.2. The CPPA-G in this process, shall act as an agent of DISCOs without assuming payment responsibilities. Payment and debts shall remain with the DISCOs. CPPA-G shall not be held liable for non-payment of Market Participants.

8.8.3. The verification of settlement of payments to all Market Participants shall be subject, but not limited to:

- (i) Verified power purchase price calculated by the CPPA-G;
- (ii) Verified generation invoices based power purchase contracts of the Generation Companies;
- (iii) Verified quantities of kilowatt-hours injected to and extracted from NTDC transmission Grid at each Common Delivery point, as informed by NTDC;



- (iv) Verified Megawatts available by generation and demanded by Distribution Companies as informed by NTDC and its System Operator;
- (v) Applicable notified NTDC use-of-system charge as determined by Authority;
- (vi) Verified tariff differential subsidy released by the Government of Pakistan; and
- (vii) Verified monies provided by the Distribution Companies;

8.8.4. As per Section 12, the invoices for settlement submitted by the Generation Companies shall be in accordance with the respective power purchase contract, and shall include sufficient information to verify the calculation, including among others:

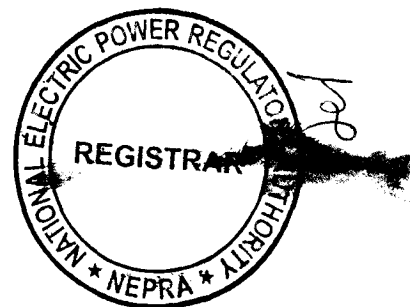
- (i) Price per kilowatt-hour as calculated by the Generation Company;
- (ii) Price per Megawatt calculated by the Generation Company;
- (iii) Energy in kilowatt-hours provided to the NTDC Transmission Grid;
- (iv) Available or declared Daily capacity Megawatts for System Operator despatch;
- (v) Schedule of adjustments, if necessary;
- (vi) GST, as applicable; and
- (vii) Total invoiced monthly bill.

8.8.5. Invoices for settlement submitted by the NTDC shall include, but not be limited to:

- (i) Use-of-system charge for the month;
- (ii) Taxes as applicable, on variable charge; and
- (iii) Total invoiced monthly bill.

8.8.6. CPPA-G, invoices to Distribution Companies shall include:

- (i) Power purchase price as calculated by the CPP:A-G in accordance with the transfer pricing mechanism;
- (ii) Energy and demand as recorded in meter reacting;
- (ii) Energy and capacity charges;
- (iii) NTDC Use of System Charge;
- (iv) Interests for late payment, when applicable;
- (v) Kilowatt-hours delivered during each billing period;
- (vi) Adjustments from previous months settlement, if necessary;



- (vii) Taxes, as applicable, and
- (ix) Total invoiced monthly bill.

9. PAYMENT SYSTEM

9.1. PAYMENT SYSTEM FOR THE INITIAL SETTLEMENT PROCEDURES

9.1.1. The CPPA-G shall follow the procedures for settlement and payment provided under Annexure 3 till three months after the Date of Registration, after which the procedures prescribed in clauses 9.2 to 9.4 shall be followed.

9.2. PAYMENT SYSTEM FOR THE NEW SETTLEMENT PROCEDURES

9.2.1. The invoice-payment system for the new settlement procedures described in clause 8.2 shall include the following characteristics:

- (i) Escrow Accounts owned by each Distribution Company and opened in scheduled banks having short term and long term rating A and above, and that receive, accept and process immediately any payment order submitted by CPPA-G, pursuant to an irrevocable mandate issued by each Distribution Company;
- (ii) A Consolidated Escrow Account, owned and managed by the CPPA-G;
- (iii) Conventional bank accounts owned and operated by each Generation Company; and
- (iv) Conventional bank accounts owned and operated by each Distribution Company

9.2.2. Each Escrow Account opened in a creditworthy bank shall be approved by the CPPA-G Board of Directors.

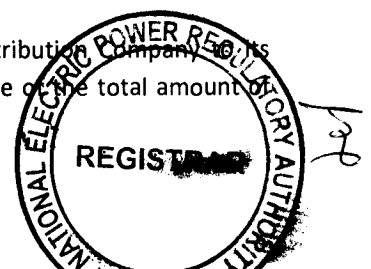
Each Distribution Company shall deposit in its approved Escrow Accounts:

- (i) All payments received from end-consumer regardless of origin; and
- (ii) Any subsidy and/or disbursement received from the Federal Government against invoices raised by the Distribution Companies.

9.2.3. Each Distribution Company shall issue an irrevocable mandate applicable to its Escrow Accounts that ensures the scheduled banks having short term and long term rating A and above managing said Distribution Company's Escrow Accounts will receive, accept and immediately process any payment requirement that is received from the CPPA-G, provided that such payment requirement is fully consistent with the Final Settlement Statement and invoice sent by CPPA-G to each Distribution Company.

9.2.4. Every week, upon the request(s) of each Distribution Company, the batik managing each Distribution Company's Escrow Accounts shall execute orders by each Distribution Company to transfer funds from its Escrow Accounts to the conventional bank accounts utilized by each Distribution Company.

9.2.5. The sum of the weekly transfers from its Escrow Accounts ordered by a Distribution Company to its conventional bank accounts shall never be higher than a pre-defined percentage of the total amount of



funds deposited in said Distribution Company's Escrow Accounts during the previous week. The pre-defined percentage, which may be different for each Distribution Company, shall be determined by Authority before the beginning of each year.

9.3. PAYMENTS OF BILLS (DISTRIBUTION COMPANY)

9.3.1. The payment by each Distribution Company shall be governed in accordance with the Escrow arrangement described in clause 8.3 of this Commercial Code.

9.4. PAYMENTS TO GENERATORS AND NTDC

9.4.1. The CPPA-G shall utilize all the funds received in the Consolidated Escrow Account to:

- (i) Collect the CPPA-G Market Operation Fee;
- (ii) Pay the Generation Companies (including, if existing, those Generation Companies that have direct commercial arrangements with Distribution Companies) for the verified invoices; and
- (iii) Pay the NTDC for Discus transmission charges.

9.4.2. In order to produce such payments, CPPA-G shall utilize the following procedure. Immediately after the due date stated in the invoices issued by CPPA-G, the amounts deposited by the banks in the CPPA-G Consolidated Escrow Account shall be analyzed by CPPA-G to determine if these payments have been made in full, are partial payments or not received at all.

9.4.3. In the event that a payment has been received in full, CPPA-G shall:

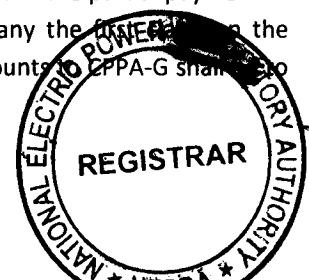
- (i) Transfer the payment to Generation Companies and NTDC as the amounts reflected in the Final Settlement Statement; and
- (ii) Transfer, to its own account, the CPPA-G Market Operation Fee, as stated in the Final Settlement Statement.

9.4.4. In the event that any Distribution Company has not fully paid its invoice, a shortfall shall occur in the Consolidated Escrow Account that CPPA-G uses to transfer payments to Generation Companies, NTDC and itself. A reduction in the transfer payments to Generation Companies, NTDC and CPPA-G shall be made in accordance with section 9.5.5 of this Commercial Code.

9.4.5. CPPA-G shall order the transfer of payments corresponding to the invoices raised by Market Participants as per relevant provisions of their respective Power/Energy Purchase Agreements.

9.4.6. When any Distribution Company fails to pay in full any monthly invoice, the following assignment rules will apply for the payment of this specific monthly invoice:

- (i) Whenever a specific Distribution Company has not remitted enough revenue collections for end consumers and subsidies and/or disbursements from the Federal Government to fully satisfy this specific monthly invoice, which includes interest and penalties as a result of the partial payment of previously issued monthly invoices by this specific Distribution Company the funds transferred from this specific Distribution Company's Escrow Accounts to CPPA-G shall be used to



clear the unpaid balances of previously issued monthly invoices plus interest and penalties. This first claim on the specific Distribution Company's Escrow Accounts, now being managed by CPPA-G through its Consolidated Escrow Account, shall be satisfied immediately in order to minimize interest and penalty charges; and

- (ii) The second, third and other sequenced claims on the aforementioned Distribution Company's Escrow Accounts, now being managed by CPPA-G through its Consolidated Escrow Account, shall be satisfied according to the priority list described in clause 9.4.5. of this Commercial Code until the funds of the aforementioned specific Distribution Company that have been transferred to CPPA-G have been exhausted fully.

9.5. ACCOUNTING PROCEDURES

9.5.1. The CPPA-G shall implement detailed accounting procedures in order to:

- (i) Clearly identify and discriminate by each category considered (i.e. payments of previous invoices, payment of interest, payment of penalties and payment of current month transactions), the monthly amounts paid by each Distribution Company;
- (ii) Calculate interests and penalties to be applied to each Market participant who fails to pay the full amount invoiced at the due date; and
- (iii) Clearly account for the deposits into and withdrawals from each Distribution Company's Escrow Accounts.

9.6. OTHER ACTIONS IN CASES OF NON-PAYMENT (OR PARTIAL PAYMENTS)

9.6.1. Whenever any Distribution Company fails to fully pay any monthly invoice issued by the CPPA-G, the calculation of the interests or any penalties that may be justified by existing power purchase contracts, shall be reflected in the next monthly invoice.

9.6.2. Each Distribution Company will continue to follow up with concerned ministries authorities for disbursement to CPPA G against the verified claims of their subsidy claims.

9.6.2. CPPA-G shall communicate the failure of any Distribution Company to fully pay any monthly invoice issued by CPPA-G to Authority, the Ministry of Water and Power and the Ministry of Finance in order to assure the enforcement of the Market Mules and the Commercial Code or to assure that other suitable substitute actions may be taken by these institutions. This communication shall include, at the minimum, the following;

- (i) Detailed information regarding the amounts not paid in the month being processed;
- (ii) Detailed information of any previously issued invoice which may still be outstanding;
- (iii) Detailed of outstanding subsidy payment required to be released by the Federal Government against the verified Subsidy claims of Distribution Companies;
- (iv) Information regarding the occurrence of such an instance since the start of CPPA-G commercial operation up to the previous two years;



- (v) Information regarding the adverse effects that such non-compliance poses on the overall electricity sector and specifically to the NTDC or Generation Companies that have not been paid in full).

9.6.3. Upon intimation by CPPr1-G, any Distribution Company that does not pay in full, shall make all its bank accounts and financial records open for inspection by CPPA-G and Authority, for the establishment of the reasons for default and the justification for corrective actions.

9.7. RECORD MAINTENANCE

9.7.1. CPPA-G shall maintain records of settlement payments to:

- (i) Each Generation Company having a power purchase contract with or novated to or administered by CPPA-G; and
- (ii) NTDC UoS.

9.7.2. CPPA-G shall keep records of settlement payments received from:

- (i) Each Distribution Company;
- (ii) Subsidy from the Federal Government; and
- (iii) Any other source, when and if applicable.

10. REPORTING MECHANISM

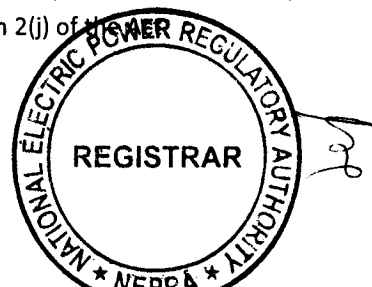
The Market Operator shall prepare following reports, the contents, periodicity, dates and authority to be submitted shall be as provided in the Annexure 4:

- (i) Settlement Report (including Preliminary Settlement Statement);
- (ii) Settlement Report (including Final Settlement Statement);
- (iii) Non Payment Reports;
- (iv) Market Operator Annual Report;

11. CPPA-G MARKET OPERATION FEE MECHANISM AND AUDITS

11.1. CPPA-G MARKET OPERATION FEE MECHANISM

11.1.1. The CPPA-G shall be financed through a charge imposed to Distribution Companies. Formerly, the costs associated with the operation of CPPA were incorporated into the UoS of the NTDC, However, next NTDC determination after commencement of Market Rules and Commercial Code, the costs associated with CPPA shall be separated from the calculation of UoS to form the CPPA-G Market Operation Fee' that shall be charged to the DISCOs in tandem to the UoS. The mechanism for calculation of the CPPA-G Market Operation Fee shall remain the same as that being used for UoS, and once calculated, shall be sent to Authority for approval in accordance with Section 7 Sub-section 2(j) of the



11.1.2. The following costs associated with the operations of CPPA-G are to be recovered through the CPPA-G Market Operation Fee:

- (i) General Establishment and Administration Expenses;
- (ii) Repair and Maintenance;
- (iii) Insurance;
- (iv) Depreciation, if any
- (v) Financial Charges and other relevant costs

11.1.3. CPPA-G shall include in the costs detailed in 11.1.2, any estimated future capital expenditures required for compliance with current and future provisions contained in this Commercial Code such as costs associated with the development of competitive market.

11.1.4. The formula for calculating the CPPA-G Market Operation Fee shall be similar to UoSC, dividing total costs as established in 11.1.2 and 11.1.3 by peak demand of DISCOs.

11.1.5. Authority may request additional information or clarifications prior to approval of CPPA-G for incorporation into this Commercial Code.

11.1.6. Once the CPPA-G Market Operation Fee is approved, CPPA-G shall communicate this value to all Market Participants on the CPPA-G official website.

11.2. MARKET TRANSACTIONS AUDIT

11.2.1. Each year or every two years, the CPPA-G shall contract a qualified independent auditor to conduct an operational audit of the market administration services including the settlement and billing system, and implementation of the Market Rules and Commercial Code.

11.2.2. After the first audit, each new audit shall include reviewing changes and actions undertaken by the CPPA-G after the recommendations and observations of the previous audit. The Auditor's report will be sent to Authority, and published on the official website of CPPA-G.

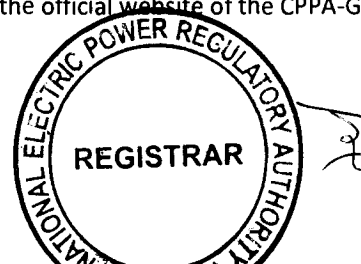
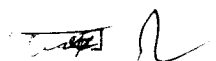
11.3. CPPA-G FINANCIAL AUDIT

11.3.1. At the end of each fiscal year, the CPPA-G will contract an independent auditor to conduct a financial audit of the CPPA-G and its budget administration.

11.3.2. The purpose of the financial audit shall be:

- (i) Ensure that the received funds are properly and transparently utilized;
- (ii) Assess the effectiveness of the CPPA-G in utilizing the fees received from Market Participants.

11.3.3. The Auditor's report shall be sent to Authority and published on the official website of the CPPA-G.

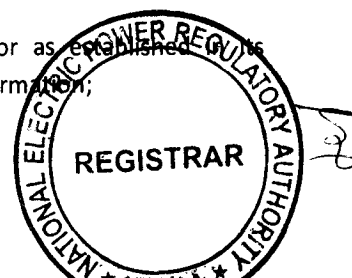


12. DATA SHARING AND COMMUNICATION

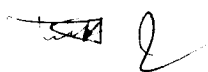
12.1. CPPA-G shall;

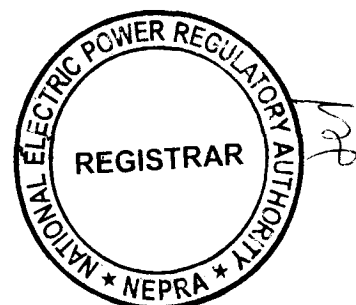
- (i) Have and maintain an official website for the purpose of communication, open access to information to the public, and data sharing with all the Market Participants and NTDC
- (ii) Provide an open and equal access to reports and non-confidential information on the CPPA-G official website to all Market Participants;
- (iii) Publish on its website the monthly results of the settlement and payment process, including (i) for Discos amounts and items invoiced, interests for late payment, payment made and amount still due; (ii) for generation, items and amount invoiced, liquidated damages, payment received and payment still due; and (iii) for NTDC, UoSC and amount, payment received and payment still due.
- (iv) Publish list and information of all Market Participants on its official website, which shall be updated regularly;
- (iv) Publish, on its official website, this Commercial Code and all existing commercial standard operating procedures for its implementation, as well as publish for consultation proposals for its amendments or to the commercial standard operating procedures or new standard operating procedures;
- (v) Publish any amendment or update to the Commercial Code or commercial Standard Operating Procedures and make public on the official website within reasonable time period after approval,;
- (vi) Liaise with other international bodies having market functions similar to CPPA-G or administering competitive power markets;
- (vii) Communicate in timely manner in accordance with this Commercial Code, all the Market Participants, the Preliminary Settlement Report, Final settlement Reports, Invoices to Distribution Companies, any corrections made there to and orders to the associated Banks for payments to the Distribution Companies;
- (ix) Communicate with the System Operator to temporarily reduce the power allocation of a Distribution Company in the event that the funds in the affected Distribution Company's Escrow Account are deemed to be insufficient for payment of the Final Settlement Statement on the Payment Due Date, in accordance with the power pool allocation mechanism;
- (x) Collect information and statistics and publish reports and information related to billing and settlement, and performance of CPPA-G administered power market;
- (xi) Communicate the CPPA-G Market Operation Fee to all Market Participants;
- (x) Publish financial audit and operation audit report, on CPPA-G official website;
- (xi) Communicate any other information that is deemed necessary, from time to time as required in the implementation of the Market Rules and the Commercial Code.

12.2. NTDC (in the capacity of Transmission service provider and System Operator as established in its "Transmission License) shall on a monthly basis provide CPPA-G the following information;



- (i) Provide the data on monthly basis for the payments of UoS, including:
 - a. Use-of-System Charge as determined by Authority;
 - b. MDI of Discos;
 - c. "Transmission network losses as determined by Authority;
- (ii) Provide information related to metering systems installation, commissioning, testing of metering systems and all other necessary information required to ensure that the commercial meters and settlement system is operational;
- (iii) to the register and regular update of all Commercial Metering Equipment for settlement purposes at all Common Delivery Points;
- (iv) Within NTDC metering system and meter reading responsibilities, share data and information related to Meter Readings taken from CDPs by the Metering Reading Committees appointed by NTDC for the billing month on the Meter Reading form that CPPA-G and NTDC will agree and may revise from time to time, to include:
 - a. Information from Generation Companies:
 - i. Name of Generation Company and ID Code;
 - ii. Metering Point Identification;
 - iii. Billing Month and Day of Meter Reading;
 - iv. Meter number and make;
 - v. Billing month Meter Reading for Energy units (Active [kWh] and Reactive [VARh]) and MDI [k-W] for both Imports (energy extracted from the grid) and Exports (energy injected and sold);
 - vi. Previous month Meter heading for Energy (Active [kWh] and Reactive [VARh]) and MDI [kW] for both Imports and Exports;
 - vii. Remarks by Metering Committee if any;
 - b. Information from Distribution Companies CDPs:
 - i. Name of Distribution Company and ID Code;
 - ii. Metering Point Identification;
 - iii. Billing Mouth and Day of Meter Reading;
 - iv. Meter number and make;





- v. Billing month Meter Reading for Energy units (Active [kWh] and Reactive [VARh]) and MDI [kW] for both Imports and Exports;
 - vi. Previous month Meter Reading for Energy (Active [kWh] and Reactive [VARh]) and MDI [kW] for both Imports and Exports;
 - vii. Remarks by Metering Committee if any;
- (v) As system operator for verification of data from each Distribution Company:
- a. Allocation of Megawatts for each hour of the day;
 - b. Draw of Megawatts for each hour of the day;
 - c. Actual amount of kilowatt-hours for a billing month;
 - d. Maximum Demand Indicator (MDI) for a billing month;
- (vi) As system operator, for each power plant/complex:
- a. Information on hourly available capacity: Dependable Capacity; or Declared Available Capacity, Revised Declared Available Capacity, Adjusted Declared Available Capacity in kW;
 - b. Hourly despatch instruction (and revised despatch instruction when applicable);
 - c. Information on number of unit start-ups, and periods with Forced/Partial and Schedule Outages in kW;
- (vii) The Meter Reading Committee appointed by NTDC is responsible for providing information regarding meter reading at each cut-off delivery point for the energy imported by the Generation Company as per the agreed Performa each month in order to enable CPPA-G to work out the Back Feed electricity consumer bill/export energy invoices; and
- (viii) Communicate any other information that is deemed necessary to implement this Commercial Code and the Market Rules.

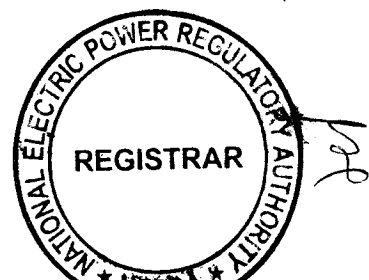
12.3. Generation Companies shall;

- (i) Provide the monthly invoices with sufficient detailed information (available capacity, net energy, prices, pass through items, fuel costs if and as applicable, etc.) to be able to verify and confirm that the calculation of the amounts shown in the invoice comply with the provisions of the power purchase contract. The CPPA-G shall verify and reconcile the invoice from the Generation Company with the information provided by the System Operator based on despatch records.

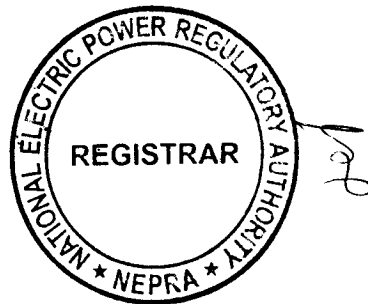
12.4. Distribution Companies shall;

- (i) Inform the funds collected on daily basis to CPPA-G in accordance with the settlement procedures included in this Commercial Code;

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- (ii) Immediately communicate to CPPA-G the status of a situation in case there are insufficient funds in the Escrow Accounts to fully cover payments;
- (iii) Provide the information required pursuant to the Power Procurement Agency Agreement.



ANNEXURES

ANNEXURE 1

Energy and Capacity sold by Generation Companies:

The following mechanism is for calculating payments to a complex of a generation company (extracted from power purchase contracts signed prior to the Date of Registration). After the meter readings are sent to CPPA-G, Energy and Capacity calculations are to be done in the following way:

A. Calculations for Capacity Payments

I. IPPS under Power Policy 2002

The Capacity Payment for the applicable month shall be equal to the aggregate sum (for all of the hours in such month) of the Capacity Payment earned for each hour of the month, as shown in the formula below:

$$\text{Capacity Payments}_M = \sum_{h=1}^n \text{Capacity Payments}_h$$

$$\text{Capacity Payments}_h = \text{Capacity Price}_h * \text{Available Capacity}^2_h$$

Where,

$$\text{Capacity Price}_h = (\text{Non-Debt Component of CPP}_h + \text{Debt Service Component}_h) * \text{PWF}_h$$

Non-Debt Component of CPP_h = Fixed O&M_h + Insurance_h + ROE³_h + ROE DC⁴_h

Debt Service Component_h = Debt Service Component [F]⁵_h + Debt Service Component [L]⁶_h

II. IPPs under Power Policy 1994

CPPA-G shall pay the Capacity Payment to the Generation Company, calculated as follows:

$$\text{Capacity Payment} = \text{Capacity Purchase Price} * \text{Dependable}^7 \text{ Capacity}$$

The Capacity Purchase Price is established on the basis of a 60% plant factor. If COD occurs on a date which is not the first day of a month, then the Capacity Payment shall be multiplied by the following as:

$$\text{Capacity Price} * \left[\frac{\text{number of days remaining in the month}}{\text{number of days in such month}} \right]$$

² Available Capacity_h = Available Capacity in KW, for hour h of the relevant Month and h= each hour in the month for which a Capacity Payment is being calculated.

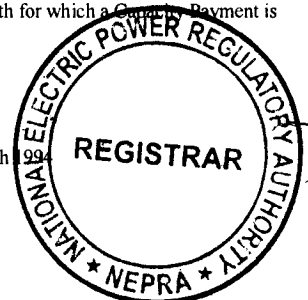
³ ROE = Return on Equity

⁴ ROE DC = Return of Equity During Construction

⁵ Debit Service Component [F] = Foreign Debit Service Component

⁶ Debit Service Component [L] = Local Debit Service Component

⁷ With respect to Power Policy 1994, Dependable Capacity is Adjusted Capacity Provided to Power Policy of March 1994



If for a period of 18 consecutive days, the Generation Company is unable to deliver a Net Electrical Output (NEO) that is at least 50% of the Dispatch Levels, then CPPA-G shall suspend Capacity Payments until the Generation Company delivers NEO for 3 consecutive hours exceeding 50% of the Dispatch instruction by NPCC as System Operator.

B. Calculations for Energy Payments

The energy payment for the relevant month shall be equal to the aggregate sum (for all of the hours in such month) of the energy payment earned for each hour of the month, and shall equal:

$$\text{Energy Payment}_M = \sum_{h=1}^n \text{Energy Payments}_h$$

Where,

- Energy Payment_M = Energy Payment, in Rupees, paid for the relevant month;
 Energy Payment_h = Energy Payment, in Rupees, paid for h hour of the month;
 n = The number of hours in the relevant month;
 h = An hour in the month for which an energy payment is being calculated;

The energy payment earned for each hour of a month shall be calculated as follows:

$$\text{Energy Payment}_h = \text{Energy Price}_h * \text{NEO}_h$$

Where,

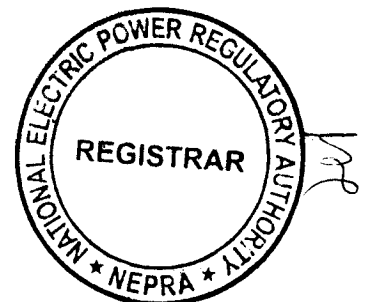
- NEO_h = The net electrical output of the complex for the relevant hour;
 Energy Payment_h = Energy Payment, in Rupees, payable for hour h;
 Energy Price_h = FCC_h + VO&M_h

Where,

- VO&M_h = hourly variable operation and maintenance (O&M) component
 FCC_h = (FCC_{REF} * FCAF_t) * K_h * DH_h

Where,

- FCC_{REF} = the reference fuel cost component
 FCAF_t = the applicable fuel cost adjustment factor
 K_h = the load correction factor for the complex in hour h
 DH_h = the heat rate degradation factor for the complex



C. Liquidated Damages

Based on the provisions contained in the signed power purchase contracts (for 1994 and 2002 Power Policy) for IPPs, CPPA-G shall calculate the LDs as follows:

I. IPPs under Power Policy 2002

Delay in Commissioning:

If the Complex is not commissioned on or before the Required COD, then the Generation Company shall pay to the Power Purchaser, monthly arrears, as LDs as calculated hereunder for delays in the occurrence of COD at the rate of US\$2.50 per kW of the Contract Capacity per month.

$$LD_M = \frac{\text{US\$2.5 x Contract Capacity in MW x 1000}}{\text{Number of days in the month}} \times \text{Number of days delayed in a month}$$

Due to Shortfall of Initial Tested Capacity in comparison to Contracted Capacity:

If the Initial Tested Capacity at the time of commissioning of the Complex on COD is less than the Contract Capacity, then the Company shall pay to the Power Purchaser L.Ds as per following formula:

$$LD_C = (\text{Contract Capacity} - \text{Initial Tested Capacity}) \text{ in MW} * \text{LD Rate}$$

Where,

LD_C = LD due to shortfall of Contract Capacity;

LD Rates are:

For Shortfall of up to 2% of Contract Capacity	= US\$ 117,000
For Shortfall >2% & up to 5%	= US\$ 234,000
For Shortfall >5% & up to 10%	= US\$ 350,000

Liquidated Damages after COD; The Generation Company shall pay LDs to the power Purchaser as formulated hereunder

1. If D.A.C is revised between 12hours and 4hours prior to the beginning of an operating day.

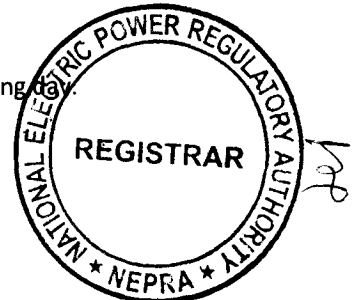
$$L.D_s = 0.1 * (\text{D.A.C. at Declaration Deadline} - \text{R.D.A.C}) * \text{Capacity Price}_h$$

2. When D.A.C is revised less than 4hours prior to the beginning of an Operating Day.

$$L.D_s = 0.2 * (\text{D.A.C. at Declaration Deadline} - \text{R.D.A.C}) * \text{Capacity Price}_h$$

3. If Company fails to comply with Dispatch Instructions.

$$L.D_s = (\text{D.A.C, or R.D.A.C if applicable} - \text{Dispatch Level achieved}) * \text{Capacity Price}_h \text{ for the relevant hour } h, \text{ of the Operating Day.}$$



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II. IPPs under Power Policy 1994

All of the LD payable tender clauses 9.4 and 9.5 of the power purchase contract (under 1994 Power Policy) shall each be indexed on the dates as follows:

$$LD = LD_{\text{Initial}} * IE_t$$

Where,

- LD = the value of the relevant LD payment as adjusted at the relevant calculation date;
- LD_{initial} = the initial value of the relevant LD payment as computed in accordance with clauses 9.4 and 9.5 of power purchase contract signed under 1994 Power Policy and;
- IE = the value of IE_t at the indexation date, t, immediately preceding the calculation date.

D. For New Generation Company

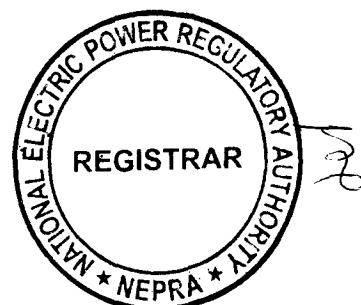
New Generation Companies that decide upon signing a legal agreement with the CPPA-G, the CPPA-G shall calculate the monthly associated liquidated damages (1.D) in accordance with the provisions contained in the signed power purchase contract.

i. Energy purchased by Generation Companies

During maintenance periods and, eventually, in exceptional conditions, the power complex of a Generation Company may receive energy from the transmission network. This energy shall be purchased by the Generation Company at a tariff determined by the Authority, which may be different than the generation prices stated in their contract. The CPPA-G shall determine, for each complex the total amount of energy purchased from the network and its corresponding price. This would be referred as Back-Feed billing.

ii. Energy Imports

Based on the information of the Commercial Metering System and the signed Interconnection Agreements, the CPPA-G shall determine the total amount of energy imported from neighbouring countries, and the corresponding amounts to be paid or received.



ANNEXURE 2

EXPORT ENERGY PAYMENT (EEP) MECHANISM / BACK-FEED ELECTRICITY

The Back-Feed billing of a Generation Company is adjusted against/net of the determination of ETR Rate as mentioned in clause 6.1.4. (i)(a), and the following mechanism is hereby used for raising the invoice of the back-feed/export energy invoices to the Generation Companies.

Back-Feed Electricity Consumer Bill is charge to generation companies for importing electricity from the NTDC Grid, and is referred to as Back Feed Billing or Export Energy Invoice. A maximum of 15 days are allocated to the Generation Company for bill payment.

Based on the information provided by NTDC, CPPA-G will work out the Export Energy Invoices.

Back-Feed Electricity Consumer Bills as per clause 12.2 (vii) of the Commercial Code. The Export Energy Invoice/Back-Feed Electricity Consumer Bill has the following important parts:

- (i) Energy and Capacity Details
 - Active Energy Meter Readings and Net/Total Energy usage in kWh
 - Reactive Energy Meter Readings and Net/Total reactive Energy usage in kVAR
 - Maximum Demand (MDI) of consumer in kW
- (ii) Power Factor and Low Power Factor Details
- (iii) Application of various Charges and Factors including GST
- (iv) Bill Adjustment (if any)

Electricity Consumer Bill Calculations

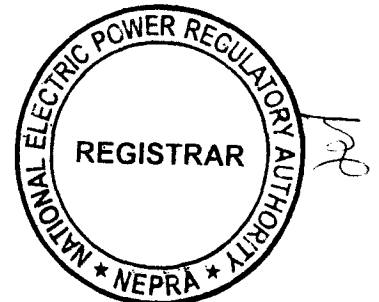
Following mechanism is used to prepare Export Energy Invoice payable by each Generation Company for the energy imported (which is the same as currently being used for raising the consumer bill by it Distribution Company as approved by Authority):

$$\text{Electricity Consumer Bill} = (\text{VC} + \text{FC} \pm \text{FPA} + \text{Misc. C} + \text{LPF Penalty} + \text{Electricity Duty} + \text{GST} \pm \text{Adjustment} \pm \text{Arrear/LPS})$$

Where,

Electricity Consumer Bill in PKR

VC	=	Variable Charges in PKR
FC	=	Fixed Charges in PKR
FPA	=	Fuel Price Adjustment in PKR
Misc. C	=	Miscellaneous Charges and Factors (e.g. Neelum-Jhelum Fund) in PKR
LPF Penalty	=	Penalty arising in case of Low Power Factor (LPF) in PKR
Electricity Duty	=	Application of 1.5% Electricity Duty in PKR
GST	=	Application of GST (as notified in percentage [%]) in PKR
Adjustment	=	Any addition or reduction in Bill (if required) in PKR



Arrears/LPS = Any addition or reduction in Bill (if required) in terms of Arrears or Late Payment Surcharge (LPS) in PKR

Calculation of Net Energy, Net Reactive Energy and Capacity Components

Net Energy usage shall be calculated for a billing month based on the Meter Reading Performa submitted from the Metering Committee. Monthly Net Energy Usage is calculated for both Active (in kWh) and Reactive Energy (kVARh). Moreover, Maximum Demand (referred to as MDI on Meter Reading Performa) (in kWV) is also based on the reading provided in the Performa.

Calculation of Power Factor and Low Power Factor

Power Factor (PF) is a unit less quantity and is calculated as follows:

$$PF = \frac{\text{Active Power (W)}}{\text{Apparent Power (VA)}}$$

Or

$$PF = \frac{\text{Active Power (W)}}{\sqrt{[\text{Active Power (W)}]^2 + [\text{Reactive Power (VAR)}]^2}}$$

Where,

PF = Power Factor or ratio of Active to Apparent Power
Active Power = Useful component of Apparent Power, measured in W, calculated from Net Active Energy usage
Reactive Power. = Wattles component of Apparent Power, measured in VAR, calculated from Net Reactive Energy usage

Power Factor should be 0.9; otherwise a Low Power Factor Penalty is applied. LPF is calculated as follows:

$$LPF = 0.9 - PF; \text{ (provided } PF < 0.9 \text{)}$$

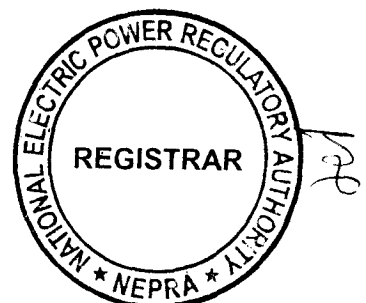
Where,

LPF = Low Power Factor
PF = Power Factor

Application of Variable and Fixed Charges/Factors

A generation company is considered as a consumer of DISCO during electricity import. Hence, the application of tariff is dependent on:

1. Location of a generation company in territory of a specific DISCO and;
2. Tariff guidelines for the respective DISCO, based on latest notification



CPPA-G will identify and highlight the Tariff category applicable for each generation company.

Variable Charges are applied on Active Energy usage and are calculated as:

$$VC = \text{Tariff} \times \text{Total Energy Imported}$$

Where,

VC = Variable Charges in PKR
Tariff = Rate per kWh, as specified in Tariff Schedule notified by GOP

Fixed Charges are applied on Active Energy usage and are calculated as:

$$FC = \text{Tariff} \times \text{MDI}$$

Where,

FC = Variable Charges in PKR
Tariff = Rate per kWh, as specified in Tariff Schedule notified by GOP

Application of Fuel Price Adjustment (FPA)

Authority issues a monthly Fuel Price Adjustment (FPA) statement depending on the cost electricity dispatched. FPA is charged per kWh and CPPA-G will apply the notified FPA (negative positive) to the Consumer Bill depending on the directives of Authority.

$$FPA_{\text{Month}} = FPA_{\text{Month Rate}} \times (\text{Total Energy Imported})_{\text{Month}}$$

Where,

FPA_{Month} = positive or negative, in PKR, based on Fuel Price Adjustment, for a specific month
FPA_{Month} = Fuel Price Adjustment Rate for a specific month (in PKR per kWh as notified by Authority)
Total Energy Imported_{Month} = positive or negative, in PKR, based on Fuel Price Adjustment, for a specific

Application of Miscellaneous Charges

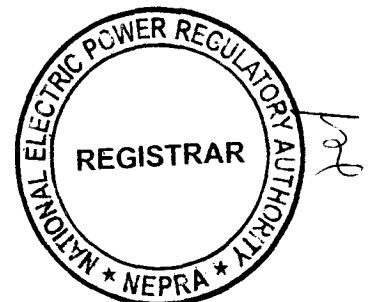
Other charges or surcharges may be applicable to electricity consumer on GOP notifications. The Miscellaneous Charge is calculated as follows:

$$\text{Misc. C} = \text{Tariff} \times \text{Total Energy Imported}$$

Where,

Misc. C = Miscellaneous Charges in PKR
Tariff = Rate per kWh, as specified in GoP Notification

This change can also be applicable per kW if directed in GoP Notification



Application of LPF Penalty

Power Factor should be at least 0.9 and a LPF Penalty is applied as follows:

$$\text{LPF Penalty} = \text{LPF} \times \text{FC (Tariff)} \times \text{MDI} \times 2$$

Where,

LPF Penalty	=	Low Power Factor Penalty in PKR
FC	=	Fixed Charges Rate, as specified in Tariff Schedule, in PKR
MDI	=	Maximum Demand in kW

Application of Electricity Duty

Electricity Duty, as notified in percentage (%) by GOP, is imposed on Variable Charges as follows:

$$\text{ED} = \text{ED}_{\%} \times \text{VC}$$

Where,

ED	=	Electricity Duty in PKR
ED _%	=	Electricity Duty Percentage, as notified by GOP (At present 1.5% is applied)
VC	=	Variable Charges in PKR

Application of GST

GST, as notified in percentage (%) by GOP, is taxed as follows:

$$\text{GST} = \text{GST}_{\%} \times (\text{VC} + \text{FC} + \text{ED})$$

Where,

GST	=	Application of GST in PKR
GST _%	=	GST Percentage, as notified by GOP (At present 17% is applied)
VC	=	Variable Charges in PKR
FC	=	Fixed Charges in PKR
ED	=	Electricity Duty in PKR

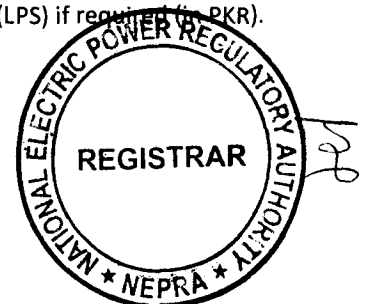
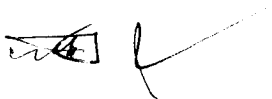
Application of Bill Adjustment

Bill is adjusted (added or subtracted as required) if the need arises.

Application of Arrear /LPS

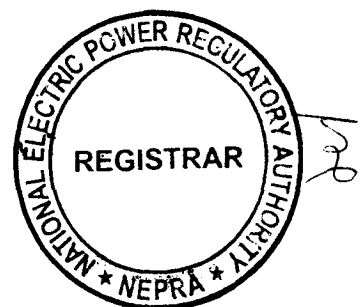
CPPA-G can also adjust the bill by incorporating Arrears or Late Payment Surcharge (LPS) if required (in PKR).

Application of Late Payment Surcharge (LPS)



In case of payment after the due date, a LPS penalty (in PKR) will be levied on the Electricity Consumer Bill and amount will be raised fittingly. At present, an 8.5% penalty is applicable.

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ANNEXURE 3

INITIAL SETTLEMENT, BILLING AND PAYMENT PROCEDURES

The settlement process involves the daily settling of receipts from Distribution Companies and corresponding payments to Generation Companies and NTDC. It begins with the billing and verification process leading to payments to the Generation Companies.

The procedures to be initially followed by CPPA-G for settlement and payment are based on the procedures being followed at CPPA of NTDC, until new settlement and payments procedures are drafted by CPPA-G, approved by Authority and implemented. The initial settlement and payment procedures that CPPA-G shall follow are detailed below:

1. CPPA-G shall verify the invoices sent by the Generation Companies. Once the invoices have been verified, the total amount payable to the concerned Generation Company for the month will be calculated by applying the Authority's determined capacity price (CPP) and insurance component on the verified capacity readings and the Authority's determined FCC and variable operation and maintenance (O&M) rate on the verified energy readings -net energy output or NEO.
2. After the application of Authority's determined rates, the invoice along with an "Advice", mentioning the verified capacity reading in kW and energy reading in kWh, shall be sent to CPPA-G Senior Officials for approval.
3. A Demand Form shall then be prepared directing the Treasury Department of CPPA-G to arrange funds for the said payment amounts.

Demand Form and its Contents

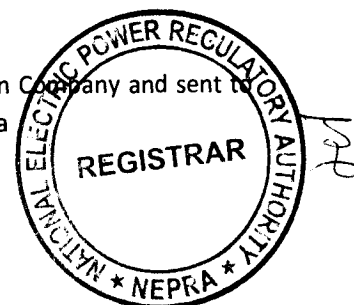
The Demand Form consists of two types; one contains capacity payments and the other contains energy payments for each Generation Company. For capacity payments, two Demand Forms carrying particulars of the current billing month amount (70% advance payment) and the previous billing month amount (30% verified payment) are sent to the CPPA-G Treasury Department. Similarly, two Demand Forms for energy payments for Net Energy Output (NEO) and applicable GST amounts are sent to the CPPA-G Treasury Department.

The contents of the Demand Form are:

- i. Name of Generation Company;
 - ii. Invoice number of the associated Generation Company;
 - iii. Amount required to be paid by CPPA-G Treasury Department; and
 - iv. Due date of payment.
4. Following is a list of reports/ statements essential in the settlement process, with associated purposes and functions of each report/statement.

Revenue Collection & Remittance Statement (sent by DISCOs)

The Revenue Collection and Remittance Statements prepared by each Distribution Company and sent to the CPPA-G Treasury Department. It contains the daily record of remittances from a



Distribution Company to CPPA-G and the amount retained by the Distribution Company for its own expenditure, mentioned under the heading of "Retention".

The contents of the Revenue Collection & Remittance Statement are:

- i. Names of the Banks and General Post Office (GPO) associated with CPPA-G for remittances by Distribution Company;
- ii. Amount transferred in each bank account on a particular day;
- iii. Previous day transactions;
- iv. Previous Day Transactions (Collection)
- v. Final cumulative amount of remittances; and
- vi. Retained amount under "Retention", often containing a break-up of the amount e.g. office expenses, pensions, salaries, taxes, and Suppliers/Contracts payments etc.

Bank Statements of Daily Transactions

The banks associated with CPPA of NTDC, will be associated with CPPA-G till the new settlement and payment procedures are drafted by CPPA-G, approved by Authority and implemented in accordance with this Commercial Code.

A Bank Statement is a computer generated transaction statement sent by the banks associated with CPPA-G to the CPPA-G Treasury Department on a daily basis.

Cash Collection Report

The Cash Collection Report shall be prepared by CPPA-G Treasury Department and will contain the following data:

- i. Collections from each Distribution Company for a particular day named "Today's collection";
- ii. Collections from each Distribution Company for the previous day named "Previous Day";
- iii. Balance in each associated bank; and
- iv. Total collections and available balances.

Daily Payment Instructions

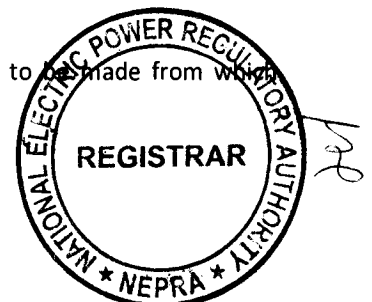
CPPA-G shall form a CPPA-G Settlement Committee. The committee will be responsible for preparing a Daily Payment Instruction to be sent to CPPA-G Treasury Department for payments to be made to each Market Participants. These Instructions are divided into:

- i. Generation Company-wise Payment Instructions
- ii. Bank-wise Payment Instructions

The following factors are being considered for issuance of Daily Payment Instructions by the CPPA-G Settlement Committee:

- i. Total payments to be made to each Generation Company;
- ii. Bank-wise break-up of Payments Instruction i.e. how much payment to be made from which bank account;





- iii. For IPPs under 1994 & 2002: based on yesterday's Net Electrical (NEO);
- iv. Additional funds if any to be allocated based on the following:
 - Percentage of total payables as of yesterday.
 - Percentage of capacity payments due beyond 45 days.
 - Total capacity payments due as of yesterday.
- v. Tariff differential subsidy is being released by Federal Government for onward payment to PSO to maintain generation level at HUBCO, KAPCO & GENCOs;
- vi. GENCOs: Salaries, pension and medical share expenses have to be paid by 27th of the each month according to respective demands of each GENCO out of revenue collection;
- vii. NTDC: Salaries, pension and medical share expenses have to be paid by 27th of the each month according to NTDC demands out of revenue collection;
- viii. WAPDA Hydel is being paid according to its monthly energy invoice from revenue collection;
- ix. Payments to Chashma Nuclear Power Plant / ShydoHydel Power are being made out of revenue collection on the basis of monthly invoice viz. number of days in the month.

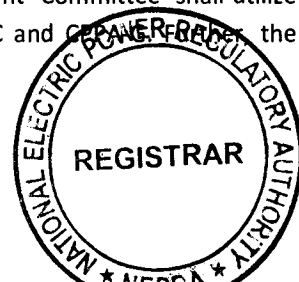
List of Pending Liabilities Report

The CPPA-G Treasury Department shall prepare the Pending Liabilities Report on a daily basis according to the payment demands received. A Summarized Pending Liabilities Report is also prepared using the List of Pending Liabilities and is updated twice a day (day start and day end). A Pending Liabilities Report contains the following information:

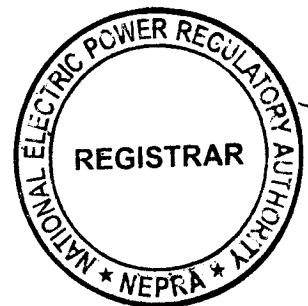
- i. Due date for the payment along with its Durand Form no. and the company name;
 - ii. Nature of the payment for each demand and subsequent payments;
 - iii. Payment (in millions) for each associated Demand Form no.;
 - iv. Additional information such as:
 - Month's opening balance for each power producer;
 - Additions made during the month for each power producer; and
 - Total payables and accumulated payment before a specific day.
5. The Government of Pakistan provides subsidy to consumers on the following factors:
- i. Tariff Differential Subsidy (TDS) as identified in the notified tariff schedule for Discos;
 - ii. Consumption of electricity for agricultural usage to Discos.

Each Distribution Company shall raise a subsidy invoice per the subsidy mechanism notified by GOP to the Ministry of Water & Power. The Ministry of Water & Power, after due verification, shall submit the subsidy invoice claims to the Ministry of Finance for onward disbursement of funds to the Distribution Companies.

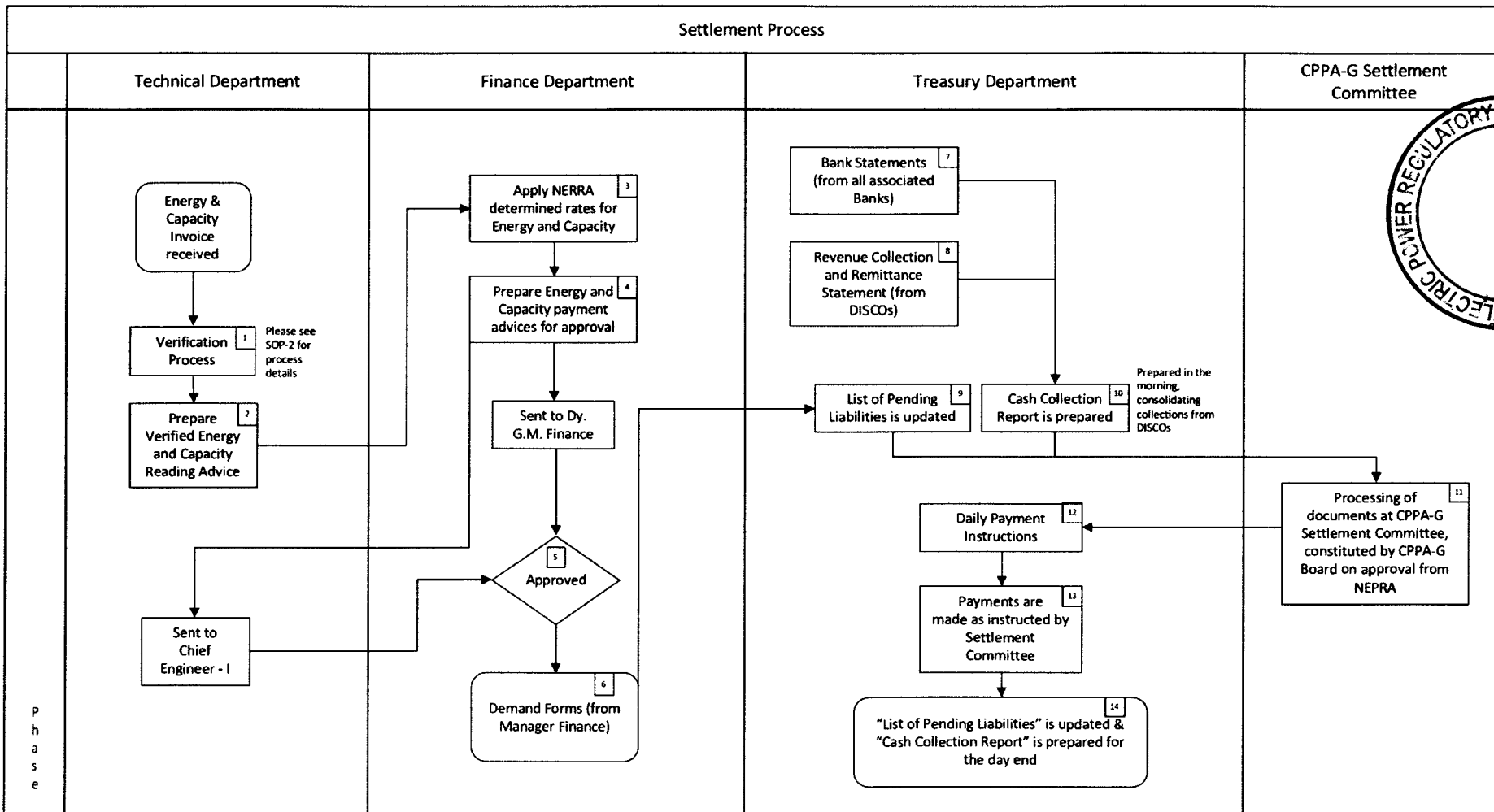
- 6. The Ministry of Finance will order for the disbursement of funds into the CPPA-G Bank Account, against the verified subsidy invoices raised by Distribution Companies, received from Ministry of Water & Power.
- 7. On receipt of funds from the Ministry of Finance, the CPPA-G Settlement Committee shall utilize the funds for discharging the liabilities of the Generation Companies, NTDC and WAPDA.



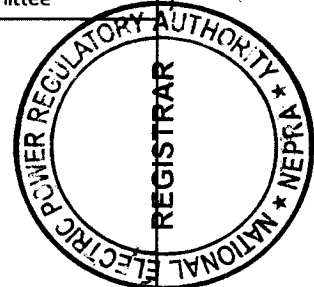
CPPA-G Treasury Department shall issue a credit memo to all Distribution Companies for the subsidy adjustment made to the Distribution Companies' Payables towards CPPA-G.



Settlement Process



Phase



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ANNEXURE 4

Report	Content	Periodicity	Dates	Submitted to
Settlement Report (Preliminary Settlement Statement)	<ul style="list-style-type: none"> - Results of the Preliminary Settlement; - Meeting quantities utilised for the Preliminary Settlement; - CPPA-G comments on the settlement produced, including the assumptions used or metering quantities that have been replaced; - Enough information for the Market Participants be able to reproduce (and eventually challenge) the calculations performed by the CPPA-G; 	Monthly	Within 10 days after the beginning of each month	All Market Participants
Settlement Report (Final Settlement Statement)	<ul style="list-style-type: none"> - Complaints received to the Preliminary Settlement Statement, with clear indication regarding if they were accepted or rejected; - Results of the Final Settlement; - Metering quantities utilised for the Final Settlement - CPPA-G comments on the settlement produced, including the assumptions used or metering quantities that have been replaced; - Enough information for the Market Participants to be able to reproduce (and eventually challenge) the calculations performed by the CPPA-G; 	Monthly	Within 10 days after the beginning of each month	All Market Participants and made publicly available on the CPPA-G website
Final Payment Report	<ul style="list-style-type: none"> - Identification of the Market Participants who have not paid the invoices issued by the CPPA-G; - Outstanding amounts; - Impact on payments to GENCOs, IPPs or the WPPO; - Other relevant information which permit the Authority, the Ministry of Water and Power or the Ministry of Finance to adequately realize of the situation and take appropriate measures 	Monthly (if required)	Within 10 days after the beginning of each month	All Market Participants Authority Ministry of Water and Power Ministry of Finance
Market Operator Final Report	<ul style="list-style-type: none"> - Description of the activities performed during the previous year; - Statistical statements covering the whole pervious year; - Comments on the any major incidence occurring in the previous year; - Proposals for Commercial Code amendments; - Market Operator Financial Statements; 	Yearly	Within the first two months of the following year	All Market Participants and made publicly available on the CPPA-G website Authority Ministry of Water and Power

