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Regulatory Framework for New Bagasse Based Cogeneration Projects





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Regulatory Framework



- National Policy for Power co-Generation by Sugar Industry 2008.
- ECC on 06 March 2013 approved Framework for Power Cogeneration 2013 (**Bagasse/Biomass**) as an addendum to the Renewable Energy Policy 2006.
- The scope of Renewable Energy Policy 2006 shall also include Bagasse/biomass/Waste –to-Energy, Bioenergy.
- The Renewable Energy Policy 2006 shall continue for an additional period of 5 years with effect from 06-03-2013
- Upfront Tariff for New Bagasse Cogeneration Projects determined by

NEPRA





- Salient Features of Frame work for power co-generation 2013 (Bagasse/ Biomass)
 - a) AEDB shall act as coordinating agency for high pressure (minimum 60 bar) bagasse/ biomass based project.
 - b) The power producer may establish the project as part of an existing sugar mill or as separate entity.
 - c) Upfront tariff for bagasse/biomass based cogeneration projects to determined by NEPRA.



2013 Frame work

- d) Tariff shall be on a per unit basis for energy delivered to the grid.
- e) Power Producer shall have the option to opt upfront tariff.
- f) Power Producer have the option to offer the energy to :-
 - i. The respective Disco at 11 kV or 132 kV or
 - ii. The CPPA at 132 kV.

The cost of Interconnection, grid station upgrades, etc. for power evacuation shall be incurred by respective Disco.

- g) It shall be mandatory for the power purchaser to evacuate all the energy offered by power producer.
- h) There shall be no requirement for a feasibility study or firm costs in case of upfront tariff.



2013 Frame work

- i) All financial and fiscal incentives available to Renewable Energy Policy 2006 shall be applicable to all project implemented under the framework.
- j) This framework shall be applicable to all bagasse/ biomass based projects commissioned after January 2013.
- k) Power producer shall submit Grid Interconnection Studies & Initial Environmental Examination Reports to relevant agencies/departments.
- l) AEDB will issue LOI to Sponsor on the basis standard proposal of Sponsor.
- m) AEDB shall issue LOS upon acceptance of upfront tariff by sponsor.



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Steps to Adopt High Pressure Cogeneration Technology for Power Export



HP Cogen-Pak

1. Request for Letter of Intent (**LoI**)
 - Submission of **Unsolicited Proposal** to **AEDB**
2. Issuance of (**LoI**) by **AEDB**
3. Post **LoI** Procedure
 - Submission of Grid Interconnection Studies
 - Submission of Initial Environmental Examination Report.
4. Apply to NEPRA
 - For Generation License
 - Opting for Upfront Tariff



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Steps to Adopt High Pressure Cogeneration Technology for Power Export



HP Cogen-Pak

5. Submission of Performance Guarantee to AEDB.
6. Issuance of Letter of Support (**LoS**) by **AEDB**
7. Process Subsequent to Issuance of **LoS**
 - Sign Implementation Agreement (**IA**) with AEDB
 - Sign Energy Purchase Agreement (**EPA**) with Purchaser
8. Financial Closure
9. Commercial Operation Date
 - Procurement and Delivery of Plant Machinery
 - Erection & Commissioning



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1-Request for Letter of Intent (LOI) to HP Cogen-Pak AEDB

Any Sponsor wishing to undertake a project at a raw site would be required to submit a detail proposal to AEDB/Provincial/AJK Agency in accordance with RE policy 2006, which include at minimum the following:

1. Statement of qualification of project sponsors, listing relevant corporate experience, personnel, and financial capacity.
2. Project Name and RET classification (i.e., wind, solar, small hydro, etc.)
3. Project location (including geographical or GPS coordinates)
4. Proposed net installed capacity (MW) and expected annual energy output (MWh)



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Request for Letter of Intent (LOI) to AEDB



5. Basic outline of plant and structures
6. **Summary implementation plan**, committing **milestones** for project preparation, implementation and completion date.
7. Estimated distance from the nearest 132 kV or 11 kV line or grid station.



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2-Issuance of Letter of Intent (LOI) by HP Cogen-Pak AEDB

- Review of proposal and qualification of sponsors by AEDB/ Provincial Agency within **30 days**
- Posting of Bank Guarantee by Sponsor within 15 days
(**@US\$ 500/MW of name plate capacity**)
- **AEDB** will issue Letter of Intent (**LOI**) within 7 days.



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3-Post Lol Procedure



- Sponsor to arrange Interconnection Studies through Planning Department of NTDC/Consultant and submission to **NTDC** for Approval
 - Load flow studies;
 - Short circuit studies;
 - Stability studies; and
 - Reliability study.
- Sponsor to hire services of Firms for Initial Environmental studies and submission to Respective Provincial **Environmental Protection Departments** for Approval



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4-Applying to NEPRA for Generation license



- Sponsor to approach NEPRA for Generation License under Application & Modification Procedure Regulation 1999 and Licensing Rules 2000.
- Application for Generation License should be submitted by Sponsor to Registrar NEPRA on the specified form.
- Sponsor has to pay a non refundable fee according to Schedule II of NEPRA Regulation 1999.



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Applying for Generation license from NEPRA



- The following Documents-in support shall be filed with the Application for Licensing:-
 - (a) Certified copies of:
 - Certificate of Incorporation.
 - Memorandum and Articles of Association.
 - The Last filed Annual Return.
 - (b) Detailed Profile of Applicant along with CV's
 - (c) Company's prospectus
 - (d) Evidence, satisfactory to NEPRA, of the availability of adequate financial and technical resources to the sponsor for generation.



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Applying for Generation license from NEPRA



- Cash balances held in reserve along with the bank certificates.
- Expressions of interest to provide credit or financing along with sources and details.
- Latest financial statements of the applicant.
- Employment records of engineering and technical staff of the applicant proposed to be employed.
- Profile of sub-contractors, if any, along with expressions of interest of such sub-contractors.
- Verifiable references in respect of the experience of the applicant and its proposed sub-contractors.



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Applying for Generation license from NEPRA



- (e) In respect of a ongoing concern, detail of any charges or encumbrances attached to the company' assets.
- (f) A prospectus, which means a report prepared by applicant setting out:-
- i. A brief introduction of the applicant;
 - ii. The salient feature of the facility;
 - iii. The proposed investment; and
 - iv. The social and environmental impact of the proposed facility in a non technical and commonly understood language.



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Applying for Generation license from NEPRA



(g) Technical Details

- The type
- Technology
- Model
- Technical details and design of the facilities proposed to be acquired, constructed, developed or installed
- The expected life of the facility or the system
- The location of the facility or the system, or the territory with outer boundaries within which the facilities or the system is proposed to be installed and operated by the licensee, along with maps and plans



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Applying for Generation license from NEPRA



- Upon being satisfied that the application is submitted in accordance with the Regulations the Registrar Shall forthwith:
 - a) shall allot a registration number to the application;
 - b) Forward the application to the Authority for a decision on the admission of the application.
 - c) Within 3 days of receipt of application from the Registrar Authority shall review the application and shall make the decision for its admission for consideration by Authority.



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Generation license from NEPRA



- Within **03 days** of the admission of the application by the NEPRA, **Registrar** Shall Advertise the following information
 - The prospectus;
 - A notice to the general public of the admission of the application;
 - An invitation to the general public to submit their comments to the registrar **within a period of 14 days from the date of the publication**
 - Such other Information as the authority may direct from time to time.



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Grant of Generation license by NEPRA



- If comments are received, the **Registrar** places the application along with comments before NEPRA. Then NEPRA will call **Applicant** to respond the comments
- If no comments received then NEPRA will issue **Generation License** to Applicant in **10 days as per the Framework**.



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Application for Opting for Upfront Tariff



HP Cogen-Pak

- Eligibility Criteria
 - Projects Recommended by **AEDB**
 - Projects Proposed plant and Machinery must be **NEW** and of acceptable quality by **AEDB**
 - Projects having Consent of **Power Purchaser** to evacuate all the Power
 - Power Producer have to offer energy to DISCO at 11 KV / 132 KV or to CPPA at 132 KV



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Application for Opting Upfront Tariff



- The process of opting for Upfront Tariff is as follows;
- The sponsor shall file an application to Registrar NEPRA to opt upfront tariff under Up-front Tariff (Approval & Procedure) Regulations, 2011 on the prescribed format.
- The application shall be submitted in triplicate ; duly signed and verified along with the authorization. The application shall also be accompanied with:-



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Opting for NEPRA Upfront Tariff



- i. **Non-refundable processing fee** according to Schedule III regulations 2011.
- ii. A copy of the certificate of incorporation and details of the sponsors of the generation facility (Certified Copy by **SECP**).
- iii. Memorandum & Articles of Association highlighting "generation of electricity" as one of the businesses of the generation facility (Certified Copy by **SECP**).
- iv. Letter of intent (**LOI**) issued by the **AEDB**.
- v. Consent of power purchaser i.e., Central Power Purchasing Agency (**CPPA**), any Distribution Company or bulk power consumer (BPC) for procurement of the electricity.



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Application for Opting Upfront Tariff



- Vi A description of the proposed generation facility and its site.
- Vii Attested copy of authorization allowing the filing of application.
- Viii Copy of the **Generation license** or an **application thereof** in accordance with the NEPRA Licensing (Application & Modification Procedure) Regulations, 1999.
- The applicant is also required to submit **Schedule IV** which is the informative summary of the applicant which mentions name, location, address of the applicant organization, plant details and site conditions and expected date of financial closure and COD.



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Application for Opting Upfront Tariff



- The Registrar **NEPRA** shall reviews the application, upon satisfaction:-
 - a) Allot a registration number to the application;
 - b) Present the application before the Authority for its consideration.
 - c) The decision of the Authority on an application to opt for the upfront tariff is conveyed to the applicant **within 10 working days of filing of the application**



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Upfront Tariff Timelines



- The Upfront Tariff will come into effect after COD
- Project Sponsors are required to Achieve COD within **02 Years** from the date of grant of Upfront Tariff and will be applicable for a period of **30 Years**.
- **NEPRA** may Review the Fuel Price Mechanism after a Period of **05 Years** if required.



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5-Letter of Support (LoS) from AEDB



- Pursuant to RE Policy 2006; within 15 days after the decision of NEPRA on application for opting the Upfront Tariff; sponsor is required to post a Performance Guarantee (**US\$ 2,500/MW**) based on project capacity in favour of the **AEDB**.
- **AEDB will issue the LoS within seven days.**
- The initial validity of performance guarantee is **03 months** in excess of validity of letter of support (**LoS**).
- **AEDB** shall cancel and return the Performance Guarantee to the Project Company on the date Financial Closing is achieved



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Letter of Support (LoS)



- The Project Company shall pay AEDB the Project facilitation and evaluation expenses for projects registered with the AEDB
 - (i) 1,000 (≤ 5 MW)
 - (ii) 5,000 (> 05 MW to 20 MW)
 - (iii) 10,000 (> 20 MW to 50 MW)
 - (iv) 20,000 (Above 50 MW)within one (01) month of issuance of this **LoS**.
- Until financial close is achieved, terms prescribed in the **LoS** governs the project and supersede all other documents and Agreements (including **LoI**).



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6-Process Subsequent to Issuance of LoS



- Standard Bankable Energy Purchase Agreements (**EPA**) & Implementation Agreement (**IA**) documents will be provided to the Power Producer **by AEDB**.
- Sign the (**IA**) and a Certified Emission Reduction Agreement (CERA) with the **AEDB**, acting on behalf and with the permission of the **GoP within 15 days**.
- Sign Energy Purchase Agreements (**EPA**) with the CPPA/power purchaser within 30 days.



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7-Financial Closure



- Power Producer to achieve the **Financial Close** within the time allowed in LOS
- Financial Closure will be Achieved when;
 - Sponsors confirm that they have met all conditions precedents (CPs) mentioned in the IA Schedule.
 - Seller **Letter of Credit** (L/C) is handed over to **Power Purchaser** as Performance Guarantee @ 35 USD/kW for two years extendable with consent of both parties
 - Letter from **State Bank of Pakistan** for income tax exemption and repatriation of equity along with dividends



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7-Financial Closure



- Irrevocable and unconditional Guarantee provided by **Government of Pakistan** (AEDB) on behalf of power purchaser with promise of payments according to EPA
- After giving letter of credit to power purchaser (**35 USD/kWh**) the Performance Guarantee already provided by sponsor to AEDB (**@ 2,500 USD/MW**) will be released by AEDB.



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8-Commercial Operation Date



- Achieve Commercial Operation Date (COD) as defined in the **IA** or **EPA** within a period of 24 months from the date of acceptance of Up front Tariff.
- For any delay in commissioning of project beyond Required Commercial Operation Date, Liquidated Damages (LDs) @ US\$ 2.5/kW/month will be levied.
- Maximum delay in commissioning of the project permitted with LDs is up-to 400 days.



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Thank You



High Pressure Cogeneration for Sugar Sector in Pakistan

