

**Report on Consultative Meeting to Agree on Guidelines**  
**Technical Assistance for National Certification Scheme for Energy**  
**Auditors/Managers in Pakistan**

**Submitted to:**

Climate Technology Centre and Network

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We will be happy to provide any further clarifications, if required.

## Abbreviations

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CTCN	:	Climate Technology Centre & Network
EA	:	Energy Auditor
EM	:	Energy Manager
EU	:	European Union
NEECA	:	National Energy Efficiency and Conservation Authority
USPCAS – E	:	U.S. -Pakistan Center for Advanced Studies in Energy (USPCAS-E)
NUST	:	National University of Sciences & Technology
UNIDO	:	United Nations Industrial Development Organization
USD	:	United States Dollar

## Table of Contents

ACKNOWLEDGEMENTS .....	II
ABBREVIATIONS.....	III
TABLE OF CONTENTS.....	IV
EXECUTIVE SUMMARY.....	1
INTRODUCTION .....	2
OUTCOME OF CONSULTATIVE MEETINGS.....	3
A. COMMENTS FROM STAKEHOLDERS: .....	3
1. PIONEER CEMENT, LAHORE: .....	3
2. KASHMIR POWER & SM, AL SHAFI GROUP, LAHORE .....	4
3. USPCAS-E NUST, ISLAMABAD .....	4
4. BESTWAY CEMENT – HATTAR.....	5
5. BESTWAY CEMENT – KALAR KAHAR .....	5
6. SAPPHIRE FIBRE LTD., LAHORE .....	7
7. ARTISTIC MILLINERS: .....	8
8. INTERLOOP, LAHORE: .....	9
9. SUSTAINABLE DEVELOPMENT POLICY INSTITUTE (SDPI), ISLAMABAD.....	9
10. SIDDIQ LEATHER, LAHORE .....	9
11. THALL INDUSTRIES (ALMOIZ, SAFINA & LAYYAH SUGAR MILLS) .....	10
12. UCH I & II POWER (PRIVATE) LTD, UCH POWER STATION, DERA MURAD JAMALI.....	10
13. UNIDO, PAKISTAN.....	10
14. UET TAXILA.....	10
B. COMMENTS FROM INTERNATIONAL EXPERT: .....	11
1) Draft Rules for Minimum Qualification for Energy Auditors and Energy Managers .....	11
2) Draft regulations for Eligibility Criteria for Accreditation of Energy Auditors and Energy Managers.....	13
3) Draft regulations for Certification Procedure for Energy Auditors and Energy Managers	19
CONCLUSION.....	31
ANNEXURES .....	32

## Executive Summary


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The National Energy Efficiency and Conservation Act 2016, paves the way for energy conservation and efficient use of energy in Pakistan. The legislation has provided a legal basis to enforce necessary measures for efficient use and conservation of energy in the country in all sectors of the economy, in coordination with the relevant Provincial Departments.

As per the act, the National Energy Efficiency and Conservation Authority (NEECA) is mandated to carry out energy audits either by itself or by directing any certified or designated energy auditor for the designated consumers. In this context, NEECA, as the CTCN request proponent, had requested CTCN's support for developing the national certification scheme for energy auditors and managers including the preparation of draft rules and regulations required for making the certification scheme effective. The objectives of this technical assistance are:

1. Identification of designated consumers based on the definition and engagement of energy user classes for industries;
2. Guidelines on the eligibility and accreditation process;
3. Revision and finalization of draft guidelines, syllabus, and course modules including the development of model question banks for examination processes;
4. Organization and delivery of a two weeks Training of Trainer (ToT) programme; and
5. Review and finalization of draft regulations to support implementation roles as defined in National Certification Scheme.

It is estimated that savings of around USD 5 billion per year and 42ktonnes per annum of carbon dioxide can be achieved through energy efficiency activities in Pakistan. The certification scheme will also create a pool of energy managers and auditors with relevant skill sets for identification of energy conservation opportunities.

Out of the above objectives, first objective, identification of designated consumers based on the definition and engagement of energy user classes for industries has been completed. The second objective is to finalise guidelines on eligibility and accreditation process of Energy Auditors and Managers. A stakeholder consultation Workshop was organised on 7<sup>th</sup> August 2020  the draft guidelines were shared with all participants. The same guidelines were also shared through email with multiple industries and associations for their feedback. Deliverable 3.1 details the feedbacks obtained from stakeholders on draft guidelines for eligibility criteria and accreditation process for Energy Auditors and Managers.

## 1. Introduction

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As per the National Energy Efficiency and Conservation Act 2016, energy audits have to be carried out either by NEECA itself or by directing the designated consumers to conduct energy audit by any certified or designated energy auditor. In this context, the national certification scheme for energy auditors and managers is being developed including the preparation of draft rules and regulations required for making the certification scheme effective. The following guidelines have been prepared.

- 1) **Guideline(s) for the accreditation of Energy Auditors and Managers –**  
A draft guideline for the accreditation of the energy auditors and managers includes the roles and responsibilities, validity of the accreditation, rules and regulations, etc. The guidelines also involve the fee structure, manner and frequency of accreditation for Energy Auditor and Energy Managers.
- 2) **Guideline(s) on eligibility criteria for the energy auditors and managers –**  
A draft document containing the prerequisites to qualify for the energy auditor and manager certification process including minimum education, work experience etc. to take into account the possible diversity of education and practical experience an individual may require based on local needs and circumstances.
- 3) **Guideline(s) for appointment of evaluators and professionals for assessment of EA/EM examinations –** Guidelines for the appointment of evaluators such as their qualification, roles and responsibilities, remunerations, validity of appointment etc. for assessment of Energy Auditor and Energy Manager Examination.

Consultative meetings were conducted to engage with stakeholders at the national and provincial level to finalize the guidelines, on the eligibility and accreditation process under National Certification Scheme, based on local needs and circumstances. In this regard, the guidelines were made available while inviting comments/suggestions/views from various Stakeholders/Interested Persons.

## 2. Outcome of Consultative Meetings

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**Deliverable 3.1** deals with the report on Consultative meetings held with stakeholders such as representatives from various industries, industrial associations and Government departments which ensures participation from all related parties in implementation of National Certification Scheme.

The list of persons, who submitted written comments/views/suggestions are enclosed as **Annexure-1** and the mail communications received are enclosed as **Annexure- 2**. Minutes of meeting held with NEECA officials to discuss stakeholder's feedback is enclosed as **Annexure-3**.

### 2.1 COMMENTS FROM STAKEHOLDERS:

The comments/views/suggestions received from the stakeholders/ Interested Persons and various issues raised on each guideline during the consultation process are discussed below:

#### 2.1.1 Pioneer Cement, Lahore:

**Reference:**

**Qualification criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and maintenance of their list**

- 1) Clause (b) sub regulation (1), Regulation (3): "experience of five years in the field of energy audit in any Sectors of Economy and out of which at least three years shall be in the large energy consuming enterprises"

And

Clause (c) sub regulation (1), Regulation (3): "undertaken and completed at least five detailed energy audit reports in any of the sectors referred to in clause (b) above in an individual capacity or as a leader or associate or active team member of the energy audit team"

**Suggestion:**

- Since it is a new exercise, five year experience may be reduced to four years for the companies.
- 2) Clause (a) sub regulation (2), Regulation (4): "Five detailed energy audit reports in any of the sectors referred to in clause (b), sub-regulation (1) of regulation 3 in an individual capacity or as a leader or associate or active team member of the energy audit team"

And

Clause (b) sub regulation (2), Regulation (4): “the feedback on 5 energy audit reports submitted to the Authority, referred to in clause (a), shall be from the respective clients, whose energy audits were conducted”

**Suggestion:**

- The number of detailed energy audit reports and feedback can be reduced to four to encourage local companies.
- The guidelines for qualification and certification procedures for the individual and the companies including various clauses outlined except few comments as noted above are acceptable.

## **2.1.2 Kashmir Power & SM, Al Shafi Group, Lahore**

**Reference:**

**Certification procedures for energy auditors and energy managers**

- 1) Clause (a) sub Rule (6), Rule (5): “The candidate appearing in national examination for energy manager shall be required to qualify the three papers specified in the above Table - Paper-I, Paper-II and Paper-III.”

**Suggestion:**

- Initially it will be two and may be increased after word.
- 2) Para (2), Rule (10): “Provided that no such renewal shall be made unless the certified energy manager has attended a short-term refresher training course conducted by the Authority or the agency, as the case may be, and has produced a certificate of participation issued in that behalf.”

**Suggestion:**

- The short courses should be provided by the NEECA on FOC basis.
- 3) Clause (d) sub Rule (1), Rule (11): “failure to attend the refresher course.”

**Suggestion:**

- No need for this condition for the EM.

## **2.1.3 USPCAS-E NUST, Islamabad**

**Reference:**

**Qualification criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and maintenance of their list**

- 1) Clause (a) sub regulation (1), Regulation (3): “*valid certificate for energy auditor under regulation 8 the National Energy Efficiency and Conservation Authority (Certification Procedures for EnergyAuditors and Energy managers) Regulations 2018*”

**Suggestion:**



- Provision should include possibility to adoption of international certifications as well, as in the beginning, critical mass of auditors will be provided through already certified auditors through international agencies i.e. APO, PEE etc.
- 2) Clause (b) sub regulation (1), Regulation (3): “experience of five years in the field of energy audit in any Sectors of Economy and out of which at least three years shall be in the large energy consuming enterprises”

**Suggestion:**

- Provision of 5 year of energy audit experience is sufficient. Otherwise definition needs to be provided regarding large energy consuming enterprise.
- 3) Clause (e) sub regulation (1), Regulation (3): *“been granted a certificate of accreditation by the Authority under regulation 6.”*

**Suggestion:**

- The regulations should address the manner in which certificate of accreditation will be issued.

## **2.1.4 BESTWAY Cement – Hattar**

**Reference:**

**Qualification criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and maintenance of their list**

- 1) Clause (b) sub regulation (1), Regulation (3): “experience of five years in the field of energy audit in any Sectors of Economy and out of which at least three years shall be in the large energy consuming enterprises”

**Comment:**

- If first energy auditors in the country are bound with 05 year experience of energy audits, then energy management system can’t be implemented without importing energy auditors with 05 year experience.

## **2.1.5 BESTWAY Cement – Kalar Kahar**

**Reference:**

**Qualification criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and maintenance of their list**

- 1) Regulation (4): “Procedure for grant of certificate of accreditation”

**Suggestion:**

- Time line should be fixed for grant of certificate of accreditation, otherwise this procedure will be endless.
- 2) Sub regulation (3), Regulation (7): “The Authority shall cause to be published the first list of accredited energy auditors and list of offices and firms of accredited energy auditors as soon as they are finalized and thereafter these lists shall be updated and published regularly and uploaded on the Authority’s official website”

**Comment:**

- Time lines should be fixed rather than regularly.

**Reference:**

**Certification procedures for energy auditors and energy managers**

- 1) Sub Regulation (1), Regulation (6): “The Authority, or the agency, as the case may be, shall, after scrutiny of application form and being satisfied that the applicant is eligible to appear for the National Examination, admit him for the National Examination by issuing him registration number EA or EM as the case may be, an admission card stating the place, date and time of the National Examination at least fifteen days before the date of the National Examination. The admit card can also be downloaded from the Authority website.”

**Suggestion:**

- Date sheet may be sent at least one month (instead of before 15 days) before the date of the National Examination to the eligible applicant.
- 2) Sub Regulation (2), Regulation (6): “Where on scrutiny of the application under sub-regulation (1) of regulation 6, an applicant is found ineligible to appear for National Examination, his application shall be rejected for reasons to be recorded in writing and he shall be intimated accordingly.”

**Suggestion:**

- Non eligible applicants should be informed before issuing of examination date sheet.
- 3) Sub Regulation (2), Regulation (7): “An unsuccessful candidate shall be allowed to take a maximum of three/four attempts per paper within six consecutive examinations held by the Authority or the agency, as the case may be, on payment of supplementary fee of rupees one thousand and five hundred per paper by means or demand draft drawn or through payment gateway on authority website in favour of National Energy Efficiency and

Conservation Authority, Islamabad. Registration of the candidate for the National Examination will be treated as first attempt irrespective of the fact whether candidate writes the examination or not.”

**Suggestion:**

- Time line should be fixed either three or four attempts whatever is feasible.
- “Writes” may be replaced with appear or this sentence may be clearly defined.

- 4) Sub Regulation (1), Regulation (12): “Where the certificate or identity card issued respectively under regulation 8 and sub regulation (2) of regulation 9 has been lost by the Energy auditor or certified energy manager; the Authority may, on an application made by him in this behalf, duly supported by a copy of first information report lodged with the concerned police station, issue a duplicate certificate or identity card, as the case may be, on payment of a fee of rupees one hundred/five hundred by demand draft drawn in favour of National Energy Efficiency and Conservation Authority, Islamabad.”

**Suggestion:**

- Fee should be rupee 100 in either case certificate or identity card.

- 5) Sub Regulation (1), Regulation (13): “The Authority may, for the purpose of these regulations, national examination for energy auditors and energy managers and for their certification and registration constitute an Examination Advisory Committee, a Technical Advisory Committee and a Certification and Registration Advisory Committee.”

**Suggestion:**

- The criteria to be defined to constitute for Examination Advisory Committee, Technical Advisory Committee and Certification and Registration Advisory Committee Chairpersons and its members to avoid any misunderstanding or ambiguity..

## **2.1.6 Sapphire Fibre Ltd., Lahore**

**Reference:**

**Qualification criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and maintenance of their list**

**Suggestion:**

- Energy Managers and Energy Auditors are to be trained by NEECA, with the help of international trainers and expert, on how to conduct the measurements, audit and assessment of the savings.
- Designated consumers notification must be carried out after three to four years, after initial qualification of the few Energy manager and Energy auditors.
- NEECA should provide a few audits in the plants, free of cost and training the auditors and plant personnel.
- As most of the Forms requires Energy managers and Accredited energy auditor signature, initial training in the examination with coaching is required.

## **2.1.7 Artistic Milliners:**

### **Reference:**

#### **Certification procedures for energy auditors and energy managers**

### **Suggestion:**

- For Auditor/Manager/Compliance, ISO 50001 LAC course should be the part to evaluate the system internally and externally. This should be done with discounted price for industries and individual with any approved training center further eligibility criteria for this should be Minimum Bachelor or DAE in any field for better documentation and standardization in the industries to follow up the things accordingly.
- We should not be stringent on eligibility criteria as huge industries can bear cost of hiring a good recourse but small industries are reluctant to invest in paying high cost to any person for this. We should not bound and let the companies decide to nominate as they feel good, our focus should be on trainings /awareness for better implementation and understanding.
- NFPA 70E & ANSI Codes trainings and certifications should be the part of law for all industries /SMEs and auditors without eligibility criteria this should be for all and this would play a vital role in energy savings as generally electrical installation are not being done as per standard and it is happening on a larger scale which is effecting energy efficiency and increase in cost ultimately.
- Online Portal or Services to contact in case of any ambiguity/clarity with respect to audit and technology consisting on experts' panel to help in implementation of observations effectively.
- Annual Energy Magazine containing all Industries good practices for energy conservation to share with others industries including information of upcoming technologies world best practices etc.

- Automatic E-Update to all stakeholders for latest progress /updates/Laws/Technologies.

### **2.1.8 Interloop, Lahore:**

**Reference:**

**Qualification criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and maintenance of their list**

**Suggestion:**

- If the organization has ISO 50001 Lead Certified Auditors on their payroll, they shall be allowed to internally conduct Energy Audit/cover some specific scope of audit on their own.

### **2.1.9 Sustainable Development Policy Institute (SDPI), Islamabad**

**Reference:**

**Certification procedures for energy auditors and energy managers**

- 1) Sub Rule (1), Rule (8): “For the purpose of certification of energy auditors and energy manager, the Authority shall issue a certificate in Form-II to the person who has passed the said National Examination.”

**Suggestion:**

- Certificate should have dates of issue & validity/expiry be mentioned on the document;
- 2) Para (2) Rule (10): “Provided that no such renewal shall be made unless the certified energy manager has attended a short-term refresher training course conducted by the Authority or the agency, as the case may be, and has produced a certificate of participation issued in that behalf.”

**Suggestion:**

- Refresher course charges to be included as/in the “Fee for Renewal”.

### **2.1.10 Siddiq Leather, Lahore**

**Suggestion:**

- Industries must be urged to use the renewable energy sources like solar and wind.

### **2.1.11 Thall Industries (Almoiz, Safina & Layyah Sugar Mills)**

**Reference:**

**Minimum Qualification for Energy Manager and Energy Auditor.**

**Suggestion:**

- EM and EA should also have expertise in the manufacturing process of the industry in which he/she is going to appoint with at least 5-10 years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation.

### **2.1.12 Uch I & II Power (Private) Ltd, Uch Power Station, Dera Murad Jamali**

**Reference:**

**Minimum Qualification for Energy Manager and Energy Auditor.**

**Suggestion:**

- No age limit for energy manager or energy Auditor eligibility criteria.

### **2.1.13 UNIDO, PAKISTAN**

**Reference:**

**Certification procedures for energy auditors and energy managers**

- 1) [Rule 10: Validity of certification – The certification made under regulation 8 shall be valid for a period of five years and renewable after every five years on an application made to the Authority in Form V.](#)

**Suggestion:**

- The renewal of certification shall be after 3 years instead of 5.

### **2.1.14 UET Taxila**

**Reference:**

**Minimum qualification for energy auditor and manager**

- 1) Clause (e), Sub-rule 2, Rule 3: Qualification of Certified Energy Auditor and Certified Energy Manager - a post-graduate in Physics or Electronics or Chemistry (with Physics and Mathematics at graduation level) with three years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation.

**Comment:**

- How this experience can be equal to the professional engineer experience? I think it should be modified; otherwise, we will open the doors of non-professionalism in this field.
- Further, there is dire need to re-examine the eligibility criteria and experience requirement.

## 2.2 COMMENTS FROM INTERNATIONAL EXPERT:

A comprehensive review of the draft rules and regulations was carried out by “Testing and Certification International Expert” of TERI. The observations of the review are listed below:

### 2.2.1 Draft Rules for Minimum Qualification for Energy Auditors and Energy Managers

1. Introduction: In exercise of the powers conferred by clause (m) of Section 10 of the National Energy Efficiency and Conservation Act, 2016 (XXX of 2016), the Federal Government, in consultation with the National Energy Efficiency and Conservation Authority, hereby makes the following rules to prescribe minimum qualification for energy auditors and managers designated or appointed under clause (l) and clause (k) of Section 10 of the Act, namely: -

**TERI Observation:** Clause (k) of Section 10 of the Act has no relevance to the minimum qualification. This clause(k) under Section (10) of the Act, directs Designated Consumers to submit information to Designated Agency on the energy consumed and action taken on the recommendation of accredited energy auditor

**TERI Suggestion:** Clause (k) not to be mentioned.

2. Sub-rule (1), Rule (2): 2.0 Definitions – (1) In these rules, unless the context otherwise required.b

**TERI Suggestion:** Alphabet “b” at the end of the sentence, to be removed.

3. Clause (a), Sub-rule (2), Rule (3): a graduate Engineer or Architect or equivalent with two years of work experience involving use of energy in operation,

maintenance, planning, energy management, energy efficiency and energy conservation; or

**TERI Observation:** If work experience requirement for graduate is 2 years, then for post graduate candidate it needs to be 1 year, since the post graduate candidate has already devoted 2 years extra period in comparison to the graduate candidate.

**TERI Suggestion:** NEECA to decide whether to consider work experience of 2 years or 3 years for graduate candidate. If 2 years is considered for graduate candidate, then for post graduate candidate, work experience required should be 1 year.

4. Clause (b), Sub-rule (2), Rule (3): a post-graduate Engineer or a post graduate Architect or equivalent degree in Management or equivalent with two years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation; or

**TERI Observation:** Proposed work experience requirement for graduate and post graduate engineer or equivalent is same (2 years).

**TERI Suggestion:** If it is proposed to be 2 years for graduate engineer or equivalent, then the work experience for post graduate candidate needs to be one year as the candidate has already devoted 2 years of extra period in comparison to a graduate candidate. Alternatively, work experience requirement for graduate can be increased to 3 years.

5. Clause (c), Sub-rule (2), Rule (3): a graduate Engineer or Architect with post-graduate degree in Management or equivalent with two years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation;

**TERI Suggestion:** Rule 2(b) and (c) appears to be same. But there may be a situation in Pakistan, where a science graduate obtains a post graduate engineering, or Architect or equivalent degree in management. Both (b) and (c) sub-rules may be retained

6. Clause (d), Sub-rule (2), Rule (3): a diploma Engineer or Architect equivalent with six years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation; or

**TERI Observation:** This Clause (d) allows a diploma engineer or Architect to write both EA/EM examinations with 6 years of work experience. In Indian case, this experience is meant for EM Examination only.



**TERI Suggestion:** NEECA may like to decide, whether it would prefer to have the same experience for both the exams or for EA exam would like to keep 10 years of work experience.

7. Clause (e), Sub-rule (2), Rule (3): *a post-graduate in Physics or Electronics or Chemistry (with Physics and Mathematics at graduation level) with three years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation.;*

**TERI Suggestion:** May be deleted, as this condition seems to be not relevant.

8. Sub-rule (4), Rule (3): Any National Examination for certification of energy managers or energy auditors held by the National Energy Efficiency and Conservation Authority or the agency appointed by the National Energy Efficiency and Conservation Authority prior to the notification of these rules shall be deemed to have been conducted under these rules.

**TERI Observation:** Whether NEECA would like to keep this sub-rule 4. This was relevant in case of India, as examination began in 2004, whereas concerned Rule was notified in 2006.

**TERI Suggestion:** In Pakistan's case, this may not be applicable, as NEECA may initiate the examination process, once related Rules and Regulations have been notified.

## **2.2.2 Draft regulations for Eligibility Criteria for Accreditation of Energy Auditors and Energy Managers**

1. Introduction: No introduction provided

**TERI Observation:** Before Regulation (1), some introduction may be provided

**TERI Suggestion:** Before Regulation (1), the following text may be provided. "In exercise of the powers conferred by Section 21 of the Act, the Board with the previous approval of the Federal Government, hereby makes the following regulations, namely:-".

2. Clause (c), Sub-regulation (1), Regulation (2): *"Energy auditor" means a person who has been issued a certificate as certified energy auditor under regulation (8) of the National Energy Efficiency and Conservation Authority (Certification Procedures for Energy Auditors and Energy managers) Regulations 2018*

**TERI Observation:** Word "Manager" to start with capital M.

3. Clause (f), Sub-regulation (1), Regulation (2): "schedule" means the Schedule appended to these regulations

**TERI Observation:** No such schedule attached.

4. Clause (d), Sub-regulation (1), Regulation (3): *undertaken and completed the energy audit and report referred to in clause (c) submitted as per the National Energy Efficiency and Conservation Authority (Manner and Intervals of Time for Conduct of Energy Audit) Regulation, 2018; and*

**TERI Observation:** This clause demands that a certified energy auditor before applying for accreditation shall complete five audit reports under prescribed regulation. It is possible, only if a Certified energy auditor is allowed to conduct mandatory energy audits.

5. Sub-regulation (3), Regulation (5): The Accreditation Advisory Committee shall assess the energy audit experience and competence of the energy auditor who has applied for a certificate of accreditation under regulation 4 on the basis of an oral interview on the following criteria, name -

**TERI Suggestion:** For the methodology to be transparent, an evaluation and weightage criteria needs to be structured separately for the approval of Accreditation Advisory Committee.

6. Sub-regulation (4), Regulation (7): Every accredited energy auditor shall submit to the Authority within 90 days any change in the information given in the application for accreditation for the purpose of updating the list.

**TERI Observation:** The 90 days' time frame is to ensure Accredited Energy Auditor submits the information within the stipulated time.

7. Sub-regulation (5), Regulation (7): **A copy of the updated list of accredited energy auditors shall be sent to the agencies of the Province and designated consumers on the first day of April every year through electronic mail.**

**TERI Suggestion:** May be rephrased as "A copy of the updated list of accredited energy auditors shall be sent to the agencies of the Province and designated consumers on the first day of April every year through electronic mail **and will also be uploaded on Authority's official website www.xyxabc.pk.**"

8. Regulation (8): Removal and restoration of names in the register of list accredited energy auditors

**TERI Suggestion:** Word "**of**" to be added between "list" and "accredited".

9. Clause (d) Sub-regulation (1), Regulation (8): If the person has failed to pay annual accreditation or fraud.

**TERI Observation:** The term annual needs to be clarified. It may be within 3 months completion of financial year or calendar year

**TERI Suggestion:** To be rephrased as “If the person has failed to pay annual accreditation fee of rupees one thousand positively.”

**TERI Suggestion:** Additional Clause (f), Sub-regulation (1), Regulation (8) to be inserted “If the person has not undertaken at least one energy audit in the last 3 years from the date of issue of Accreditation Certificate”

#### 10. Regulation (9): **Cancellation of certificate of accreditation**

**TERI Observation:** There is one issue, which needs to be addressed. If an accredited energy auditor is in the process of conducting mandatory energy audit of a designated consumer and his certificate of accreditation is cancelled. This may please be deliberated and addressed accordingly in the regulations.

**TERI Suggestion:**  
Options may be:

1. Accredited energy auditor is required to return the energy audit fee, as paid to him by designated consumer, in case accreditation certificate is cancelled during the process of conduct of energy audit.
2. He may be allowed to complete mandatory energy audit of designated consumer and then his accreditation certificate is cancelled.

11. Sub-regulation (4), Regulation (9): Where the certificate issued by the **Bureau** is damaged, the **Bureau** may on an application made in this behalf and on surrendering of the damaged certificate, issue a duplicate certificate on receipt of a fee of Rupees five hundred by way of demand draft drawn in favor of National Energy Efficiency and Conservation Authority, Islamabad or by any electronic mode of payment.

**TERI Observation:** Word “**Bureau**” to be replaced with “**Authority**”

12. Sub-regulation (2), Regulation (11): The Authority may make available the information received by it under sub-regulation

**TERI Observation:** To be revised as “The Authority may make available the information received by it under sub-regulation (1)”

13. Form I: I am working as certified energy auditor at ..... (full address of the place of work)..... and hereby apply for certificate of accreditation.

**TERI Suggestion:** To be modified as “I am working/self-employed as certified energy auditor at ..... (full address of the place of work)..... and hereby apply for certificate of accreditation.”

14. Sub-point (c), Point (2): five detailed energy audit reports carried out by me after I have become certified energy auditor and such reports mentions my name as either in an individual capacity or as a leader or associate or active team member of the energy audit team

**TERI Observation:** It will become really difficult for the Authority to provide accreditation to energy auditors because it might take 2 to 3 years’ time after certification to complete five energy audits, as there will be limited opportunities for the auditor.

It is feared that this clause may result in long delays in conducting mandatory energy audits, as there may not be enough accredited energy auditors in the country to provide services to DCs.

**TERI Suggestion:** Reports of energy audits done before or after obtaining the certification are to be accepted for evaluation.

15. Sub-point (d), Point (2): The energy audit reports are in compliance as per the National Energy Efficiency and Conservation Authority (Manner and Intervals of Time for Conduct of Energy Audit) Regulation, 2018

**TERI Observation:** Same as point (14). This provision may be deleted, as energy audit reports conducted in past may not entirely meet the compliance of the said regulation.

16. Sub-point (h), Point (2): Letter from the organization, whose name is given as Firms’ name, under which energy audit as proposed has been conducted.’

**TERI Suggestion:** Maybe rephrased as “Letter from the organization, whose name is given as Firms’ name, under which energy audit as proposed will be conducted.”

17. Point (3): The duly filled in Form-III and Form-IV as it is applicable is are also enclosed

**TERI Suggestion:** Word “is” to be replaced with “are”

18. Sub-point (20), Point (4): annual accreditation fee of rupees one thousand.

**TERI Suggestion:** May be deleted, as applicant is not accredited at the time of application or may be modified as: annual accreditation fee of rupees one thousand, on refundable basis if not accredited

19. Signature.....  
Name.....  
Designation.....

**TERI Suggestion:** Contact Number and Email ID also to be added.

20. Form II: This is to certify that Mr./Ms./M/s.....having his /her/its registered office at ..... has been given accreditation as accredited as accredited energy auditor. The certificate shall be effective from ..... day of .....20.

**TERI Observation:** Whether accreditation is for individual or firm? If accreditation is only for individuals, word “M/s” to be removed.

21. On cancellation, the certificate of accreditation shall be surrendered to the Bureau within fifteen days from the date of receipt of order of cancelation.

**TERI Suggestion:** Word “Bureau” to be replaced with “Authority”

22. Form III, Heading: [See regulation 7(1)]  
National Energy Efficiency and Conservation Authority  
Register containing List of Accredited Energy Auditors

**TERI Suggestion:** “(To be submitted by the applicant at the time of submission of application in hard and soft copy to Authority)” to be added.

**TERI Suggestion:** Table Column 4: “Photograph of Energy Auditor” to be added

23. Serial No 4. In table, row no. 4: Date of passing in the examination in “Energy Performance Assessment for Equipment and Utility System”

**TERI Suggestion:** Not required, as row number 3 requires date of certification as energy auditor. Once a candidate has received energy auditor certificate, it is certain that candidate has passed this 4<sup>th</sup> paper as well

24. In Table, row no. 5: Examination Registration Number of  
(i) Energy Auditor  
(ii) “Energy Performance Assessment for Equipment and Utility Systems”

**TERI Suggestion:** Can be rephrased as “Energy Manager up gradation to Energy Auditor”

25. In Table, row no. 6: Certificate Registration Number of  
(i) Energy Auditor

(ii) *“Energy Performance Assessment for Equipment and Utility Systems”*

**TERI Suggestion:** Any certified energy manager who has upgraded his certificate to Certified Energy Auditor to be given Energy Auditor registration number and after passing this paper, to be given Certificate of Energy Auditor. Thus point (ii) “Energy Performance Assessment for Equipment and Utility Systems” not required.

26. In Table, row no. 6: Date of issue of accreditation certificate

**TERI Suggestion:** To be filled by Authority

27. FORM IV

[See regulation 7(2)]

National Energy Efficiency and Conservation Authority  
Register containing List of Accredited Energy Auditors

**TERI Suggestion:** *“(To be submitted by the applicant at the time of submission of application in hard and soft copy to Authority)”* to be added.

**TERI Suggestion:** In Table, row no. 2: **“Information in respect of accredited energy auditor”** to be added.

**TERI Suggestion:** In Table, column 4: “Photograph of the energy auditor” to be added.

28. Serial No 4. In table, row no. 4: Date of passing in the examination in “Energy Performance Assessment for Equipment and Utility System”

**TERI Suggestion:** Not required, as already mentioned in Form III.

29. In Table, row no. 5: Examination Registration Number of

(i) Energy Auditor

(ii) *“Energy Performance Assessment for Equipment and Utility Systems”*

**TERI Suggestion:** Can be rephrased as **“Energy Manager up gradation to Energy Auditor”**

30. In Table, row no. 6: Certificate Registration Number of

(i) Energy Auditor

(ii) *“Energy Performance Assessment for Equipment and Utility Systems”*

**TERI Suggestion:** Any certified energy manager who has upgraded his certificate to Certified Energy Auditor to be given Energy Auditor registration number and after passing this paper, to be given Certificate of Energy Auditor. Thus point (ii) “Energy Performance Assessment for Equipment and Utility Systems” not required

31. In Table, row no. 7: Date of issue of accreditation certificate

**TERI Suggestion:** To be filled by Authority

32. In Table, row no. 9: Date of accreditation as accredited energy auditor

**TERI Suggestion:** To be filled by Authority

33. In Table, row no. 21 a: Energy audit process system (list sectors) - If no energy audit has been carried out of the process system and parameters, please list nil. National Energy Efficiency and Conservation Authority will be calling for detailed information incase agency has listed its energy audit expertise in the process systems

**TERI Suggestion:** Grammatical correction: Energy audit of process system (list sectors) - If no energy audit has been carried out of the process system and parameters, please list nil. National Energy Efficiency and Conservation Authority will be calling for detailed information incase agency has listed its energy audit expertise in the process systems

34. In Table, row no 21 b: Energy audit thermal utility system (list sectors)

**TERI Suggestion:** Grammatical correction: Energy audit of thermal utility system (list sectors)

35. In Table, row no 21 c: Energy audit electrical utility system (list sectors)

**TERI Suggestion:** Grammatical correction: Energy audit of electrical utility system (list sectors)

**TERI Suggestion:** Additional row “D” to be added: Remarks (If any)

### **2.2.3 Draft regulations for Certification Procedure for Energy Auditors and Energy Managers**

9. Clause 1, sub-clause 1: These regulations may be called the National Energy Efficiency and Conservation Authority (Certification Procedures for Energy Auditors and Energy managers) Regulations 2018

**TERI Suggestion:** The year is mentioned as 2018 and needs to be replaced with the year the regulations will be notified.



10. Clause f of Sub-regulation 1 of Regulation 2: National Examination” means a National Examination defined in clause (g) of sub rule (1) of rule (2) of the Energy Efficiency and Conservation (Minimum Qualification for Energy Auditors and Managers) Rules, 2018 and conducted accordingly under regulation 3;

**TERI Observation:** Clause, sub-rule and rule number incorrect.

11. Sub-regulation 1 of Regulation 3: For the purpose of certification of energy auditor or energy managers, the Authority shall, either by itself or through an agency, conduct the National Examination referred to in clause (f) of sub-regulation (1) of regulation 2.

**TERI Observation:** The good thing about this sub clause is that there no specific direction whether exam will be written or computer based. This flexibility will help NEECA to decide the conduct of examination either way.

12. Sub-regulation 2 of Regulation 3: The Authority shall, by publication in the newspaper, notify the date, time and place where such National Examination shall be conducted.

**TERI Observation:** Instead of notifying through newspaper, **notification can be done through NEECA website to reduce extra expenditure.**

13. Regulation 4: No person shall be eligible to appear for National Examination unless he possesses qualifications specified in sub-rule (2) of rule 3 of the Energy Conservation (Minimum Qualification for Energy auditors and Energy Managers) Rules 2018.

**TERI Suggestion:** This is a Policy decision to be taken by NEECA. Many a time request will be received from outside nationals to write the examination and it will become a difficult job for NEECA to reply to those nationals, if country policy does not allow. Please note, once an outside National clears the exam, he becomes eligible for appointment or designated as energy manager. Thus NEECA can decide to added the words **“and is a Pakistan national”** at the end of Regulation 4.

14. Sub-regulation 1, Regulation 5: A person who is eligible to appear for the National Examination under regulation 4 shall seek admission for such examination by making an application to the Authority in Form-I

**TERI Suggestion:** It is better to develop software to facilitate interested candidates to apply online.



15. Sub-regulation 1, Regulation 5: Each application shall be accompanied by the following amount of fee payable by demand draft drawn in favour of the National Energy Efficiency and Conservation Authority, Islamabad, namely: -

**TERI Suggestion:** Facility for payment through online payment gateway needs to be provided for ease of applying online.

16. Sub-clause I, Clause a, Sub-regulation 2, Regulation 5: For all candidates: Rs. Five Hundred only

**TERI Suggestion:** To be rephrased as “For all candidates, excluding supplementary candidates and candidates applying for up gradation from energy manager to energy auditor: Rs. Five Hundred only”

17. Clause b, Sub-regulation 2, Regulation 5: Certification Fee including examination fee for candidates appearing in all 4 subjects

For all self-sponsored candidates:	Rs. Five Thousand only
For company sponsored candidates:	Rs. Ten Thousand only

**TERI Observation:** There is ambiguity on the fee structure for candidates appearing in only 3 subjects. In order to avoid confusion, Sub-regulation 2, Regulation 5 can be rephrased as

“Certification Fee including examination fee for candidates appearing in **Certified Energy Auditor or Certified Energy Manager Examination**

- |      |                                     |                        |
|------|-------------------------------------|------------------------|
| (i)  | For all self-sponsored candidates : | Rs. Five Thousand only |
| (ii) | For company sponsored candidates:   | Rs. Ten Thousand only” |

18. Clause c, Sub-regulation 2, Regulation 5: (c) For Up-gradation of certification from energy manager to energy auditor the certification fee shall be as under

- |      |                                   |   |                                   |
|------|-----------------------------------|---|-----------------------------------|
| (i)  | For All Self Sponsored Candidates | - | Rs One Thousand five hundred only |
| (ii) | For Company Sponsored Candidates  | - | Rs Three Thousand Only            |

**TERI Suggestion:** It is recommended to rephrase as” For Up-gradation of certification from energy manager to energy auditor the certification fee shall be as under **(applicable to those candidates who have registered earlier as energy manager and have EM registration number)**

- |      |                                   |   |                                   |
|------|-----------------------------------|---|-----------------------------------|
| (i)  | For All Self Sponsored Candidates | - | Rs One Thousand five hundred only |
| (ii) | For Company Sponsored Candidates  | - | Rs Three Thousand Only”           |

**TERI Suggestion:** Addition of clause d, sub-rule **(2), rule (5): For all eligible supplementary candidates irrespective of self-sponsored or company sponsored per paper - Rs. One thousand five hundred only**

19. Sub rule (4) rule (5): A prospectus containing scheme and modalities for the National Examination including eligibility, syllabus and reference material for such examination, shall be made available by the **Bureau** at least three months before the actual date of examination.

**TERI Suggestion:** Word **Bureau** to be replaced with **Authority**

20. The details of papers, the duration of examination, in such papers and maximum marks for each of them shall be as specified in the Table below:

Paper No	Subject of the paper	Duration of the examination	Max Marks
I	General Aspects of Energy Management & Energy Audit.	3 Hrs	150
II	Energy Efficiency in Thermal Utilities	3 Hrs	150
III	Energy Efficiency in Electrical Utilities	3 Hrs	150
IV	Energy Performance Assessment for Equipment and Utility systems (Open Book Examination)	<b><u>2 Hrs</u></b>	100

The topics covered for each paper is specified in Schedule I annexed to these regulations

**TERI Suggestion:** Many candidates in India have complained that time of 2 hours is not sufficient for paper IV. **Authority may think of making it a 2.5 to 3 hours exam. It may be deliberated with stake holders.**

21. Clause (a) and (b), sub rule (6), rule (5): The scheme for the national examination shall be as under: -
- (a) The candidate appearing in national examination for energy manager shall be required to qualify the three papers specified in the above Table - **Paper-I, Paper -II and Paper-III.**
- (b) The candidate appearing in the national examination for energy auditor shall be required to qualify the four papers specified in the above Table as **Paper-I, Paper -II, Paper-III and Paper-IV**

**TERI Suggestion:** Additional clause (c) and (d), sub rule (6) of rule (5) to be added:

- (c) **Any candidate registering for energy auditor exam and clears Paper-I, Paper-II and Paper -III, shall qualify as certified energy manager**

(d) *A qualified certified energy auditor is also a qualified certified energy manager*

22. Sub rule (1) rule (6): The Authority, or the agency, as the case may be, shall, after scrutiny of application form and being satisfied that the applicant is eligible to appear for the National Examination, admit him for the National Examination by issuing him an admission card stating the place, date and time of the National Examination at least fifteen days before the date of the National Examination.

**TERI Suggestion:** To be rephrased as The Authority, or the agency, as the case may be, shall, after scrutiny of application form and being satisfied that the applicant is eligible to appear for the National Examination, admit him for the National Examination by issuing him **Registration number -EA or EM, as the case may be,** an admission card stating the place, date and time of the National Examination at least fifteen days before the date of the National Examination.  
**This Admit card can also be downloaded from Agency or Authority website**

23. Sub rule (1) rule (7): A candidate shall be declared to have passed the National Examination if he secures a minimum of fifty per cent marks in each paper for the National Examination.

**TERI Observation:** As per Pakistan's legal system, does he also mean she?

24. Sub rule (2), rule (7): An unsuccessful candidate shall be allowed to take a maximum of three attempts per paper within six consecutive examinations held by the Authority or the agency, as the case may be, on payment of supplementary fee of rupees one thousand and five hundred per paper by means of demand draft drawn in favour of National Energy Efficiency and Conservation Authority, Islamabad.

**TERI Suggestion:** Many candidates in India were unable to satisfy the condition of **three** attempts. **Four** attempts can be provided to the candidates.

May be rephrased as "An unsuccessful candidate shall be allowed to take a maximum of **three** attempts per paper within six consecutive examinations held by the Authority or the agency, as the case may be, on payment of supplementary fee of rupees one thousand and five hundred per paper by means of demand draft drawn **or through payment gateway on Authority or Agency website,** in favour of National Energy Efficiency and Conservation Authority, Islamabad.  
**Registration of the candidate for the National Examination will be treated as first attempt irrespective of the fact whether candidate writes the examination or not."**

25. Sub rule (3) rule (7): An unsuccessful candidate shall undertake examination as per the latest version of books, which may be downloaded from Authority's website, namely [www.xyzabc.pk](http://www.xyzabc.pk)

**TERI Suggestion:** May be rephrased as “An unsuccessful candidate shall undertake examination as per the latest version of books **based on syllabus in force**, which may be downloaded from Authority’s website, namely [www.xyzabc.pk](http://www.xyzabc.pk)”

26. Sub rule (2) rule (8): The certified Energy Auditor and certified Energy Manager shall be eligible for appointment **or designation** as Energy Manager in-charge of activities for efficient use of energy and its conservation by any user or class of users of energy in the **energy intensive industries**.

**TERI Observation:** Due to the word “designation”, other countries have faced many problems especially in Textile sector. An outsider, certified energy manager or certified energy auditor, who is not employee of the company, is being retained as designated energy manager and such an individual is not of much use as he/she may be designated by more than one DC. Such a designated energy manager will not be looking in to the day to day affairs of the plant. Also this defies the purpose of Energy Conservation act. Since it is in Pakistan’s National Energy Efficiency and Conservation Act, nothing can be done until and unless it is amended.

Designated consumers, as energy intensive industries not defined in Pakistan act.

27. Sub rule (3) rule (9): Each certified energy auditor and certified energy manager shall be eligible to be **designated or** appointed as energy manager by the designated consumer under clause (I) of section 10 of the Act.

**TERI Observation:** Same feedback as point number 26.

28. Rule 10: Validity of certification – The certification made under regulation 8 shall be valid for a period of five years and renewable after every five years on an application made to the Authority in Form V.

Provided that no such renewal shall be made unless the certified energy manager has attended a short-term refresher training course conducted by the Authority or the agency, as the case may be, and has produced a certificate of participation issued in that behalf.

**TERI Observation:** The renewal of certification is a cumbersome process and difficult for the Agency or Authority to execute. Indian experience is not so good. Also, this does not result in any useful benefit. This may be discussed with Stake holders. As far as possible, this clause may be avoided.

It will be really difficult for a certified person residing outside the country to get this revalidation done.

29. Sub rule (1) rule (11) Cancellation of certification –

The Authority may cancel the certification of energy auditor or energy manager on a complaint made against him for –

- (a) any commission or omission amounting to professional misconduct;
- (b) any misrepresentation of facts, data or reports on energy consumption;
- (c) any act amounting to fraud;
- (d) failure to attend the refresher course**

**TERI Observation:** Linked to rule (10) mentioned in point 29.

30. Sub rule (4) rule (11): In case the cancellation has been done on grounds specified in clause (d) of sub-regulation (1), **cancellation of the certificate shall be restored as soon as he informs the Authority that he has attended the refresher course.**

**TERI Observation:** Linked to rule (10) mentioned in point 29.

31. Sub rule (1) rule (12): Where the certificate or identity card issued respectively under regulation 8 and sub regulation (2) of regulation 9 has been lost by the certified energy auditor or certified energy manager; the Authority may, on an application made by him in this behalf, duly supported by a copy of first information report lodged with the concerned police station, issue a duplicate certificate or identity card, as the case may be, on payment of a fee of **rupees one hundred** by demand draft drawn in favour of National Energy Efficiency and Conservation Authority, Islamabad.

**TERI Suggestion:** Fees for issuance of duplicate certificate may be increased to **rupees five hundred** to cover costs of printing, posting and other administrative expenses.

32. Sub rule (2) rule (12): Where any certificate or identity card issued by the **Bureau** is damaged, the **Bureau** may on an application made in this behalf and on surrender of damaged certificate or identity card, issue a duplicate certificate or identity card on payment of a fee of **rupees one hundred** by demand draft drawn in favour of National Energy Efficiency and Conservation Authority, Islamabad

**TERI Suggestion:** Word Bureau to be replaced with Authority

Fees for issuance of duplicate certificate may be increased to **rupees five hundred** to cover costs of printing, posting and other administrative expenses.

33. Rule (13): Constitution of Advisory Committees –

- (1) The Authority may, for the purpose of these regulations, national examination for energy auditors and energy managers and for their certification and registration

constitutes an Examination Advisory Committee, a Technical Advisory Committee and a Certification and Registration Advisory Committee.

- (2) Each Advisory Committee shall consist of a Chairperson and not more than six other persons to be nominated by the Authority.

***TERI Suggestion:*** Proposing three Advisory Committees will increase the work load of the NEECA. It is proposed that there may be only One Examination Advisory Committee, headed by MD, NEECA and not more than six members. The Examination Advisory Committee may constitute Technical Committee and Certification Registration Committee, and other Committees, to assist Examination Advisory Committee.

In fact, there may be only 2 Advisory Committees- One Management Advisory Committee under the Chairpersonship of Secretary of the Ministry to whom NEECA would be reporting and Second Policy Advisory Committee under the Chairpersonship of MD, NEECA. This policy Advisory Committee may have powers to constitute various committees. Examination Committee or Board of Examination may be constituted by Policy Advisory Committee.

Forms I, II, III, IIIA, IV and V incorporating all necessary changes are mentioned below:

**Form-II**

**[See regulation 8]**

**NATIONAL ENERGY EFFICIENCY AND CONSERVATION AUTHORITY**

Examination Registration No.....

Serial Number.....

Certification Registration No.....

**CERTIFICATE FOR CERTIFIED ENERGY AUDITOR/ENERGY MANAGER**

Photograph

This is to certify that Mr./Mrs./Ms.....Son /Daughter of.....who has passed the National Examination for certification of energy auditor/energy manager held in the month of.....(Year) is qualified as certified energy auditor/energy manager subject to the provisions of the National Energy Efficiency and Conservation Authority (Certification Procedures for Energy Auditors and Energy managers) Regulations 2018.

This certificate shall be valid for five years with effect from the date of award of this certificate and shall be renewable subject to attending the prescribed refresher training course once in five years.

**TERI Suggestion: As mentioned in point 22, linked to rule (10), refresher course may be omitted. Under such situation, above statement is not required.**

His/Her name has been entered in the Register of certified energy auditor/energy manager at Serial Number..... being maintained by the National Energy Efficiency and Conservation Authority under the aforesaid regulations.

Mr./Mrs./Ms.....is deemed to have qualified for appointment or designation as energy manager under clause (l) of section 10 of the Act.

Given under the seal of the National Energy Efficiency and Conservation Authority, this.....day of .....20.....

(Signature and Seal)

Secretary

National Energy Efficiency and Conservation Authority

Dates of attending the refresher course	Secretary's signature	Dates of attending the refresher course	Secretary's Signature

**TERI Suggestion: As mentioned in point 22, linked to rule (10), refresher course may be omitted. Under such situation, above table is not required**



**FORM -V**

**[Refer regulation 10]**

**Application for Renewal of Certification**

Date: .....

From

Mr./Mrs./Ms .....

Registration No .....

Postal Address: .....

To

The Secretary

National Energy Efficiency and Conservation Authority

Address: .....

**Dear Sir/madam,**

*Subject: Renewal of certification as energy manager/ energy auditor*

This is to inform you that I have attended the short-term refresher training course and enclose here with the certificate of participation issued in this behalf.

I hereby apply for renewal of my certification as energy auditor or energy manager. The certificate for doing the needful is enclosed.

Yours faithfully,

(Signature).....

(Name).....

**TERI Suggestion: As mentioned in point 22, linked to rule (10), refresher course may be omitted. Under such situation the above form is not require).**

## Schedule I

### SUBJECTS FOR NATIONAL EXAMINATION

**TERI Suggestion: Subject adjusted as per the course material**

### 3. Conclusion

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The comments / suggestions /views received from various stakeholders were submitted to the implementer, NEECA, for their review and updating of draft regulations based on local needs and requirements.

- 1) All the participants have accepted the guidelines for eligibility criteria set for Energy Auditors and Energy Managers and the examination procedures. Few have suggested for change in number of examination papers. Some recommendation on inclusion of “ISO: 50001 certification” to be part of certification procedure.
- 2) Clarification needs to be provided to the stakeholders regarding the sequence of activities / procedures involved in certification of EA and EM, energy audit reports, procedure of accreditation and subsequent refresher course for certification renewal.
- 3) Awareness creation about need for the new certification procedure, job creation, adoption of energy efficient technologies and sustainable development should be carried out by NEECA to clear ambiguity in implementation of NEECA act.
- 4) Training of Energy Managers and Energy Auditors with the help of international trainers and experts through NEECA to be implemented.

## Annexures

### 1. List of persons, who submitted written comments/views/suggestions

S.No	Name	Company
1	Mr. Javed Elahi	Pioneer Cement Limited, Lahore
2	Mr. Kashif Munir	Kashmir Power & SM, Al Shafi Group, Lahore
3	Mr.Ahmed Ammar Yasser	USPCAS-E NUST, Islamabad
4	Mr. Ghulam Yasin	Bestway Cement –Hattar, Islamabad
5	Mr. Asim Saeed/Azhar Hussain Ch	Bestway Cement KK, Kalar Kahar
6	Mr. Muhammad Zubair	Sapphire Fibres Ltd., Lahore
7	Mr. Mohsin Raza	Artistic Fabric & Garment Industries (Pvt.) Ltd. DD-II, Bin Qasim Town Karachi
8	Mr. Faizan Ul Haq	Interloop limited, Lahore
9	Dr. Mahmood A. Khwaja	Sustainable Development Policy Institute(SDPI), Islamabad
10	Mr. Asif Mahmood	Siddiq Leather (Pvt.) Limited
11	Mr. Ali Hassan	Thall Industries (Almoiz, Safina & Layyah Sugar Mills)
12	Mr. Waseem Ellahi	Uch I & II Power (Private) Ltd, Uch Power Station, Dera Murad Jamali
13	Mr. Masroor Ahmed Khan	UNIDO, PAKISTAN
14	Mr. Tanzeel-ur- Rashid	UET Taxila

## **2. Written Comments/Views/Suggestions – Email received from Stakeholders**

# Feedback for Finalization of the Guidelines and Regulations on Energy Efficiency

## 1) Pioneer Cement, Lahore:

**From:** Sh. Javed Elahi <[jelahi@pioneercement.com](mailto:jelahi@pioneercement.com)>

**Sent:** Wednesday, January 29, 2020 4:11 PM

**To:** 'Qazi Sabir' <[qazi.sabir@pitcopk.com](mailto:qazi.sabir@pitcopk.com)>; Rashid Ahmed (<[rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)> <[rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)>

**Cc:** 'sabreen.ahmed@teri.res.in' <[sabreen.ahmed@teri.res.in](mailto:sabreen.ahmed@teri.res.in)>; 'C Vijayakumar' <[vijaykc@teri.res.in](mailto:vijaykc@teri.res.in)>; [aslam.baloch@pioneercement.com](mailto:aslam.baloch@pioneercement.com); [sohail.anjum@pioneercement.com](mailto:sohail.anjum@pioneercement.com); [arif.dar@pioneercement.com](mailto:arif.dar@pioneercement.com); Sajid Feroze (<[sajid.feroze@mega-in.com](mailto:sajid.feroze@mega-in.com)> <[sajid.feroze@mega-in.com](mailto:sajid.feroze@mega-in.com)>

**Subject:** RE: Pioneer Cement: Feedback for Finalization of the Guidelines and Regulations on Energy Efficiency

Dear Qazi Sabir,

We shall thank the initiative of the government to transform ENERCON to NEECA and implementing the energy audit is good step for conservation of energy industry wide which is need of the day.

We have reviewed the guidelines and have following comments;

1. Clause 3. Interval of time for conduct of energy audit; since there are not many accredited energy auditors available, the period be extended from 18 months to 24 months to give time to individuals & companies to get certification and be ready to carry out the energy audit.
2. Clause 3(2) interval of time for conduct ---- is acceptable.
3. Page (8) Form 1- section (A) coal : provision be made for various types of coal i.e. imported & local in the form.
4. Page (21) clause 3 (1), b&c ; since it is a new exercise five year experience may be reduced to four years for the companies.
5. Page (22) clause 4 (2) a&b : the no of detailed energy audit reports and feedback be reduced to four to encourage local companies.

The guidelines for qualification and certification procedures for the individual and the companies including various clauses outlined except few comments as noted above are acceptable.

Best Regards.

**Sh. Javed Elahi**

Advisor Technical | Pioneer Cement Ltd. | Tel: +92 42 37503570-72 | Direct: +92 42 37427599 | Ext: 342 |

Email: [jelahi@pioneercement.com](mailto:jelahi@pioneercement.com) | Web: [www.pioneercement.com](http://www.pioneercement.com) |

**P please consider the environment before printing this email.**

## 2) Siddiq Leather, Lahore:

**From:** Asif Mahmood (External) <[asif@siddiqleather.com](mailto:asif@siddiqleather.com)>  
**Sent:** Thursday, January 30, 2020 10:35 AM  
**To:** [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)  
**Cc:** 'PITCO Qazi Sabir' <[gazi.sabir@pitcopk.com](mailto:gazi.sabir@pitcopk.com)>; [shahzaib.chattha@pitcopk.com](mailto:shahzaib.chattha@pitcopk.com); 'Mian Muhammad Musaddiq sb' <[musaddiq@siddiqleather.com](mailto:musaddiq@siddiqleather.com)>  
**Subject:** RE: Siddiq Leather: Feedback for Finalization of the Guidelines and Regulations on Energy Efficiency

Dear sir,

Aoa,

Sorry for late reply as I was out of city. I have studied the Guidelines and Regulations on Energy Efficiency. It is really a fantastic job done to improve the Energy Efficiency in industrial sector.

My suggestion is that industries must be urged to use the renewable energy sources like solar and wind.

Regards

Asif

Mr. Asif Mahmood  
Manager Electrical  
Siddiq Leather (Pvt.) Limited,  
Sheikhupura Road,  
Lahore.

### 3) Sustainable Development Policy Institute(SDPI), Islamabad:

Dear Rashid Sahib,

Please could not review earlier. .... I hope the following are useful/helpful and in time (reference as in **bold**):

#### **DRAFT REGULATIONS Manner and Interval of Time for Conduct of Energy Audit**

##### **A. 4(3)(a)**

(a) The ToRs of the appointed Energy Manager ensure, his cooperation/responsibility of the same.

(b) (ii) against agreed/proposed targets/time frame.

##### **B. 7(3)**

List with new addition/deletion/revision, under intimation, periodically or as per need from time to time.

#### **Draft Certification procedures:**

1. **5(3)/Certification** ... No comments

1. **8 Certification**

Should some guidelines standard/authority recommended fee, charged by the EA/AM be also mentioned here???

1. **10/Validity**

2. Should Certificate dates of issue & validity/expiry be mentioned on the document ???(like our passport)???

3. Refresher course charges to be included as/in the "Fee for Renewal)

##### **F.11/Cancellation**

- Need to reconsider the text carefully, as it reflects merely a "Complaint" what about its validity? May be revise as "a valid complaint"???

- (d) consider revising as ".... Failure to present certificate of participation, with the renewal request (make certificate oP binding)

##### **G. Form I/16**

Text looks confusing/ambiguous – why given an option to the applicant. Either it should just one training facility or subject to applicant residence an alternative facility close to the applicant as per decision by the authority.

##### **H. Form V/Renewal** – No comment

Please call, if you may need any clarification to the above comments/suggestions.

Best wishes.

Dr. Mahmood A. Khwaja, Ph.D.

SDPI, Islamabad.

[www.sdpi.org](http://www.sdpi.org)

051 2278134 & 36



## 4) Bestway Cement – Hattar, Islamabad

**From:** Ghulam Yasin <[ghulam.yasin@bestway.com.pk](mailto:ghulam.yasin@bestway.com.pk)>

**Sent:** Tuesday, January 28, 2020 4:41 PM

**To:** 'Azhar Hussain Ch' <[azhar.hussain@bestway.com.pk](mailto:azhar.hussain@bestway.com.pk)>

**Cc:** [gmworks1@bestway.com.pk](mailto:gmworks1@bestway.com.pk); [gmworks2@bestway.com.pk](mailto:gmworks2@bestway.com.pk); [gmworks3@bestway.com.pk](mailto:gmworks3@bestway.com.pk); [gmworks4@bestway.com.pk](mailto:gmworks4@bestway.com.pk); [zafar.javaid@bestway.com.pk](mailto:zafar.javaid@bestway.com.pk); QC HATTAR <[gchtr@bestway.com.pk](mailto:gchtr@bestway.com.pk)>; [qcchk@bestway.com.pk](mailto:qcchk@bestway.com.pk); Raza Mir <[raza.mir@bestway.com.pk](mailto:raza.mir@bestway.com.pk)>; [mohammad.saleem@bestway.com.pk](mailto:mohammad.saleem@bestway.com.pk); [mumtaz.rehman@bestway.com.pk](mailto:mumtaz.rehman@bestway.com.pk); [abdul.hadi@bestway.com.pk](mailto:abdul.hadi@bestway.com.pk); [gazi.sabir@pitcopk.com](mailto:gazi.sabir@pitcopk.com); [imran@pitcopk.com](mailto:imran@pitcopk.com); [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)

**Subject:** RE: Bestway Cement KK: Feedback for Finalization of the Guidelines and Regulations on Energy Efficiency

Respected Sir,

Relevant stuff is very limited however certain areas may be touched for improvement as below;

Comments Cum Suggestions

Keeping in view the culture of various industries in Pakistan and entry of this new energy management system for implementation, it is appealed that the relevant documents (regulations, manuals, certifications, reports etc.) should be simple and specific. What I believe is to obtain objectives of energy management systems in our industries instead competing for legal terminologies and articles.

Some particular remarks pertinent “Attached Guidelines Regulations”

Page No. 01

### **Interval of time for conduct of Certification Energy Audit**

(1) Every designated consumer (industry) shall have its **first energy audit** conducted by an accredited energy auditor within 02 years of the notification issued by Federal Government under clause .....

(2) The interval of time for conduction of **certification energy** audit should be 1 year after conduction of first energy audit. The certification will be required to be **renewed after 03** years.

(3) The interval of time for conduction of **surveillance audit should be every year** by energy auditors with reports to certification authorities and the consumers.

Page No. 75

### **Qualification, Criteria and conditions for accreditation of energy auditor**

An energy auditor shall be qualified to become an accredited energy auditor if, he/she has

1- Minimum education qualification Graduation, Engineering etc.

- 2- Hold certain no. of relevant trainings/seminars
- 3- Valid certificate for energy auditor .....

**If first energy auditors in the country are bound with 05 year experience of energy audits then energy management system can't be implemented without importing energy auditors with 05 year experience.**

Regards,  
**Ghulam Yasin**  
DGM  
Department of (E&IC)

## 5) Interloop, Lahore:

**From:** Faizan ul Haq <[faizan@interloop.com.pk](mailto:faizan@interloop.com.pk)>

**Sent:** Tuesday, January 28, 2020 10:21 AM

**To:** [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)

**Cc:** Naseer Ahmad <[naseer@interloop.com.pk](mailto:naseer@interloop.com.pk)>; KHAWAR ALI <[khawar.ali@interloop.com.pk](mailto:khawar.ali@interloop.com.pk)>; [shahzaib.chattha@pitcopk.com](mailto:shahzaib.chattha@pitcopk.com); [gazi.sabir@pitcopk.com](mailto:gazi.sabir@pitcopk.com)

**Subject:** RE: Interloop: Feedback for Finalization of the Guidelines and Regulations on Energy Efficiency

Dear Mr. Rashid,

As per our telephonic conversation, please see Interloop's feedback on the attached Guidelines you sent to us regarding Energy Audit regulation under NEECA Act.

- **Interval of time for conduct of energy audit:**  
*Companies with ISO 50001 – Energy Management System certification shall be allowed to conduct subsequent energy audit after five years.*
- **Qualifications, criteria and conditions for accreditation of energy auditor:**  
*If the organization has ISO 50001 Lead Certified Auditors on their payroll, they shall be allowed to internally conduct Energy Audit/cover some specific scope of audit on their own.*

The remaining points in your clauses seems to be fine on our end but since we are ISO 50001 certified company and that's a standard regarding energy management system, our hope is that clauses/benefits related to that standard must be included in Energy Audit regulation under NEECA Act.

Thank you for providing us with the opportunity to give feedback on this regulatory process.

Best,

Faizan Ul Haq

Dy. Manager Energy, In-Charge Energy Cell

Hoseiry Div. 02 | Interloop Limited

T: +92-41-4360400, Ext: 4728/4768 | M: +92-320-1717014

E: [faizan@interloop.com.pk](mailto:faizan@interloop.com.pk) | W: [www.interloop-pk.com](http://www.interloop-pk.com)



## 6) Bestway Cement Kalar Kahar

**From:** P.A to GM Power <[gmpower@bestway.com.pk](mailto:gmpower@bestway.com.pk)>

**Sent:** Tuesday, January 28, 2020 10:14 AM

**To:** [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)

**Cc:** [asim.saeed@bestway.com.pk](mailto:asim.saeed@bestway.com.pk); [azhar.hussain@bestway.com.pk](mailto:azhar.hussain@bestway.com.pk); [gmworks4@bestway.com.pk](mailto:gmworks4@bestway.com.pk)

**Subject:** FW: Bestway Cement KK: Feedback for Finalization of the Guidelines and Regulations on Energy Efficiency

After review of attached document, we agreed with following suggestions.

1. Energy audit needs to be done after 02 years instead of 1.5 years after the notification.
2. Internal Auditor should be qualified, certified and experienced, agreed with the criteria mentioned in attached document.
3. Energy report shall highlighted energy consumption cost, monitoring & controlling of idle operation of areas and machines.
4. Some comments are inside the document on Page 22&25.

Regards,

**Azhar Hussain Ch.**

General Manager (Power Plants)

**From:** Asim Saeed [mailto:[asim.saeed@bestway.com.pk](mailto:asim.saeed@bestway.com.pk)]

**Sent:** 24 April 2020 16:53

**To:** [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)

**Cc:** [ijaz.ahmed@bestway.com.pk](mailto:ijaz.ahmed@bestway.com.pk); [azhar.hussain@bestway.com.pk](mailto:azhar.hussain@bestway.com.pk); [ajmal.hasan@bestway.com.pk](mailto:ajmal.hasan@bestway.com.pk); 'PITCO Qazi Sabir'; [asadm\\_46@yahoo.com](mailto:asadm_46@yahoo.com); Sabreen Ahmed; C Vijayakumar

**Subject:** FW: Bestway Cement KK: Feedback for Finalization of the Regulations on Energy Efficiency and Energy Auditing

Dear Rashid,

Please attached herewith two documents having comments / suggestions for improvement. Other documents seem ok.

Regards,

Asim Saeed

**From:** [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com) [mailto:[rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)]

**Sent:** Thursday, 9 April 2020 2:43 PM

**To:** [asim.saeed@bestway.com.pk](mailto:asim.saeed@bestway.com.pk)

**Cc:** PITCO Qazi Sabir; [asadm\\_46@yahoo.com](mailto:asadm_46@yahoo.com); [sabreen.ahmed@teri.res.in](mailto:sabreen.ahmed@teri.res.in); 'C Vijayakumar'; [imran@pitcopk.com](mailto:imran@pitcopk.com)

**Subject:** Bestway Cement KK: Feedback for Finalization of the Regulations on Energy Efficiency and Energy Auditing

Mr. Asim Saeed

General Manager Works

Bestway Cement KK

Kalar Kahar.

## 7) Artistic Milliners:

**Subject:**RE: Artistic Fabric & Garment Industries: Feedback for Finalization of the Guidelines and Regulations on Energy Efficiency

**Date:**Sat, 25 Jan 2020 12:13:46 +0500

**From:**Mohsin Raza (AFM2-Compliance) <[mohsin.raza@artisticfabricmills.com](mailto:mohsin.raza@artisticfabricmills.com)>

**To:**[rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)

**CC:**'PITCO Qazi Sabir' <[qazi.sabir@pitcopk.com](mailto:qazi.sabir@pitcopk.com)>, [shahzaib.chattha@pitcopk.com](mailto:shahzaib.chattha@pitcopk.com)

Dear Mr.Rashid,

Assalamualaikum!

As per your email kindly note feedback/suggestions for kind consideration in the regulations draft.

- For Auditor/Manager/Compliance ISO 50001 LAC course should be the part to evaluate the system internally and externally. This should be done with discounted price for industries and individual with any approved training center further eligibility criteria for this should be Minimum Bachelor or DAE in any field for better documentation and standardization in the industries to follow up the things accordingly.

We should not be stringent on eligibility criteria as a huge industries can bear cost of hiring a good recourse but small industries are reluctant to invest in paying high cost to any person for this. We should not bound and let the companies decide to nominate as they feel good, our focus should be on trainings /awareness for better implementation and understanding.

- HSE / Fire & Safety practices [Safety devices in any upcoming and existing technologies, Internal /External Trainings, Documentation etc.] should be the part of energy audit because in most of the fire cases poor electrical installations have been the main contributor.
- A detailed paragraph should be provided in the law with respect to HSE protocols and checking parameters.
- NFPA 70E & ANSI Codes trainings and certifications should be the part of law for all industries /SMEs and auditors without eligibility criteria this should be for all and this would play a vital role in energy savings as generally electrical installation are not being done as per standard and it is happening on a larger scale which is effecting energy efficiency and increase in cost ultimately.
- Online Portal or Services to contact in case of any ambiguity/clarity with respect to audit and technology consisting on experts' panel to help in implementation of observations effectively.
- Annual Energy Magazine containing all Industries good practices for energy conservation to share with others industries including information of upcoming technologies world best practices etc.
- Automatic E-Update to all stakeholders for latest progress /updates/Laws/Technologies.

If we make this as a part of law then it would be implemented if we don't make it a law then nobody wants to implement and monitoring cannot be done.

This is from our side on a positive note.

Regards,  
Mohsin Raza

Manager Compliance  
Artistic Fabric & Garments Industries (Pvt.) Ltd.  
Cell # 0321-2440501

## **8) Kashmir Power & SM:**

Dear Mr. Rashid,

Thanks for sharing the documents for comments, it will be more appreciated if you allow more time and the related documents (Form and Manner and Time for Furnishing Information with Regard to Energy Consumed and Action Taken on Recommendations of Accredited Energy Auditor) Rules, 2018

Please find the attached having my comments on sticky notes.

If you extend this time line at least one month then we will further read it carefully and argue accordingly.

Regards,  
Kashif Munir  
General Manager (Power)  
Al Shafi Group,  
Lahore.



## 9) UNIDO, PAKISTAN

**From:** KHAN, Masroor Ahmed [mailto:M.KHAN2@unido.org]

**Sent:** 24 April 2020 00:05

**To:** rashid.ahmed@pitcopk.com

**Cc:** asadm\_46@yahoo.com; PITCO Qazi Sabir; C Vijayakumar; Sabreen Ahmed

**Subject:** RE: UNIDO: Feedback for Finalization of the Regulations on Energy Efficiency and Energy Auditing

Dear Rashid Sb,

Please find my comments on the draft as shared, as below

### Manner and Interval of time for conducting energy audit:

Why three years? **Ideally speaking, It shall be done every year.** Since each year there is the ISO 50001 compliance audit, it means that for a good sustainable EE activity, it shall be done each year. It shall be at least cover 75 percent of energy consumption (based on significant energy consumption.). It will be easy for the accredited energy auditor (AEA) to refer to previous year audit for preparing next year audit. If there is 2-3 year gap, the audit would be more difficult and also will not give proper monitoring to EE activities within factory. **It can also be done in the way that the first year audit would be detailed one, while other next 2 audits be the re-evaluation of progress (less detailed audit).**

AEA is also establishing SEC's. Is the NEECA Act is working on the criteria for identifying SEC for different designated consumers, because identifying SEC is of little importance now, as it is established fact that SEC is a misleading tool for energy performance evaluation. It is of value for only those processes, where there is no base load and only one energy driver (variable). For large manufacturing sectors, for which, designated consumers scheme is made, SEC is of no use, since having large base load and complex activities of having multi variables.. **Even if NEECA want to utilise SEC, it shall identify with the help of industrial sectors experts, the SEC bases first (production is too vague a term as a denominator).**

### Accreditation of AEA:

Such company shall have at least one sector expert, related to the sub-sector for which energy audit is done, who can audit process related energy users. Otherwise, it would hire one expert from market to qualify to audit that sector company.

### Certification of CEA and CEM:

The renewal of certification shall be after 3 years instead of 5.

### Appointment of Energy Manager:

There must be a provision for a designating energy team assisting Energy Manager, for larger organizations. A manager is nothing without a competent and qualified team.

**Note: The NEECA Act does not consider incentivising those organization who opt for ISO 50001 certification. If adequate mechanisms are in-placed to fit in the certified organization, in such a way that they are exempted from many such procedural things of the act, it will not only serve the objective of the Act, but will motivate organizations to avail iso 50001 and also remove burden on NEECA for enforcing the act.**

I would suggest as to have a final workshops on the findings of the survey when it is completed, to have a comprehensive talks on this.

best regards

---

**Masroor Ahmed Khan**

**National Project Manager**

Sustainable Energy Initiative for Industries in Pakistan

United Nations Industrial Development Organization

Tel: +92 51 8354820 Mobile: 0335 7888128

E-Mail: m.khan2@unido.org



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION

## 10) UET Taxila

**From:** Tanzeel-ur- Rashid <[tanzeel.ur.rashid@uettaxila.edu.pk](mailto:tanzeel.ur.rashid@uettaxila.edu.pk)>

**Sent:** Sunday, April 26, 2020 1:38 AM

**To:** [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)

**Subject:** RE: Reminder: UET Taxila: Feedback for Finalization of the Regulations on Energy Efficiency and Energy Auditing

Dear Rashid Sb.

AsslamuAlikum!

Last time, I recommended some eligibility criteria with some horizontal expansion.

The only point that can be critical is the evaluation of Experience of candidate, i.e., It should be elaborated and the transparent metrics to assess the one's experience. Otherwise, there will be flood of incompetency in this delicate field/profession.

Also, there could be the PDUs (Professional Development Units) for candidate eligibility.

Further, in most of the cases, we try to establish very rigid rules from administrative point of view, but vague in nature technically. To prove the candidate competency for auditor, there might be comprehensive multi aspect formula rather just number of audits and expertise for use of instruments. The levels of professional diplomas can be introduced such as Associate Auditors etc. for fresh candidates in this field.

"a post-graduate in Physics or Electronics or Chemistry (with Physics and Mathematics at graduation level) with three years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation."

How this experience can be equal to the professional engineer experience? I think it should be modified otherwise, we will open the doors of non-professionalism in this field.

Further, there is dire need to reexamine the eligibility criteria and experience requirement.

Kindest Regards,

Tanzeel

## 11) Uch I & II Power (Private) Ltd, Uch Power Station, Dera Murad Jamali

**From:** waseem.ellahi@uchpower.com [mailto:waseem.ellahi@uchpower.com]

**Sent:** 23 April 2020 13:25

**To:** rashid.ahmed@pitcopk.com

**Cc:** qazi.sabir@pitcopk.com; asadm\_46@yahoo.com; Sabreen Ahmed; C Vijayakumar

**Subject:** RE: Uch Power: Feedback for Finalization of the Regulations on Energy Efficiency and Energy Auditing

Dear Rashid Ahmed

Thanks for your email on the subject to me. I really appreciate the initiative taken on the subject which I personally feel is the need of time as it will improve the quality management processes of the industry and as a consequence favors the national cause as well in terms of financial burden.

In the draft version "Manner and interval of time for conducting energy audits"

Under 7.1B (b) Generation through steam turbine only two fuels are mentioned coal and biomass

1. Need to add Gas as a fuel as well as some of steam generation units uses additional duct burners in the boilers for having additional power output from steam turbine while operating in a combined cycle mode.
2. Some steam turbines operates in combined cycle mode on purely exhaust flue gasses from Gas turbines having no fuel at all.
3. Under 7.2, the term process heating and its boundaries needs to be defined clearly. As in conventional steam turbines process heating start first for preparing steam pressure and temperatures for the unit to start. Where as in combined cycle Gas turbine synchronized first and then hold at min load for heating of HRSG and building steam temperature and pressures. You are still generating units in GT open cycle mode but you are doing process heating for the steam turbine to start.
4. In 7.1B(c) add RLNG as a fuel for GTs.
5. On point is worth considering most of the companies have financial years from Jan to Dec while you are taking it from April to March. Would advise to keep the same Jan to Dec in order to match the report with the company's yearly financial report.
6. I hope there is no age limit for energy manager or energy Auditor eligibility criteria.

This is all I could advise for the time being.

Best regards

Waseem Ellahi

## 12) Thall Industries (Almoiz, Safina & Layyah Sugar Mills)

**From:** ali.hassan@almoiz.com [mailto:ali.hassan@almoiz.com]

**Sent:** 17 April 2020 16:17

**To:** rashid.ahmed@pitcopk.com; ali.hassan@gmail.com

**Cc:** 'PITCO Qazi Sabir'; asadm\_46@yahoo.com; Sabreen Ahmed; C Vijayakumar; imran@pitcopk.com; salman.shehryar@almoiz.com; 'Ahmed Hasan Hameed'

**Subject:** RE: Thall Industries (Almoiz, Safina & Layyah Sugar Mills): Feedback for Finalization of the Regulations on Energy Efficiency and Energy Auditing

Dear Rashid sb,  
AoA

Please find below our comments

**Regulation: Minimum Qualification for Energy Manager and Energy Auditor.**

Article: 03

EM and EA should also have expertise in the manufacturing process of the industry in which he/she is going to appoint with at least 5-10 years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation.

**Regulation: Form, Manners and Time for information on recommendations of accredited EA.**

Article: 3.1 & 3.2

Forms attached in regulations for gathering & presenting the information regarding energy consumption and actions taken on recommendations of EA should be custom designed for every specific industry/consumer and that could be revised/improved later on.

**Regulation: Manner and Interval of Time for Conduct of Energy Audit.**

Article: 3.1 & 3.2

Some industries/consumers seasonal operation, like being a sugar industry we usually have 100-120 days of operation in a year so there must be some rules for conducting energy audits in such cases.

Article: 05

After implementation of recommendations, apart from process and operation efficiencies what other benefits a Designated Consumers can avail on national and international level?

Also we need to confirm if authority provides any guarantee for the financial feasibility of recommendations?

Best Regards,

Ali Hassan

Manager Engineering

Engineering & Business Development

### 13) USPCAS-E NUST, Islamabad

**From:** Ammar Yasser <[ammar312@gmail.com](mailto:ammar312@gmail.com)>

**Sent:** Sunday, February 2, 2020 12:01 PM

**To:** [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)

**Cc:** Ahmed Yasser <[ammar.yasser@asu.edu](mailto:ammar.yasser@asu.edu)>; PITCO Qazi Sabir <[gazi.sabir@pitcopk.com](mailto:gazi.sabir@pitcopk.com)>

**Subject:** Re: FW: USPCAS-E NUST: Feedback for Finalization of the Guidelines and Regulations on Energy Efficiency

Dear Rashid Sb,

Apologies for the delayed response as I was outstation and had limited desktop access.  
Attached are my comments on the guidelines.

---

Best Regards  
Ahmed Ammar Yasser  
C:0334-8693368

## 14) Sapphire Fibres, Lahore

**From:** Muhammad Zubair (Knits) [<mailto:muhammad.zubair@sapphirefibres.com>]

**Sent:** 20 December 2019 15:25

**To:** [rashid.ahmed@pitcopk.com](mailto:rashid.ahmed@pitcopk.com)

**Cc:** PITCO Qazi Sabir; Sabreen Ahmed; [asadm\\_46@yahoo.com](mailto:asadm_46@yahoo.com)

**Subject:** RE: UN-CTCN Project: Draft TOC of Energy Auditors/Managers curriculum, Draft Regulations & event presentation

Dear Mr. Rashid Ahmed,

We would like to take this opportunity to thank NEECA, CTCN, PITCO and TERI for organizing the Stakeholder Consultation Workshop on 7th August 2019. The National Certification Scheme will go a long way in bringing about an energy efficiency revolution in Pakistan and also provide new job opportunities for our professionals.

We have gone through the draft rules and regulations shared with us and would like to provide the following feedback/suggestions.

- 1) Energy Managers and Energy Auditors are to be trained by NECCA, with the help of international trainers and expert, on how to conduct the measurements, audit and assessment of the savings;
- 2) Designated consumers notification must be carried out after three to four years, after initial qualification of the few Energy manager and Energy auditors.
- 3) NECCA should provide a few audits in the plants, free of cost and training the auditors and plant personnel.
- 4) Time duration of the conducting audit can be increased from three years to five years.
- 5) As most of the Forms requires Energy managers and Accredited energy auditor signature, initial training in the examination with coaching is required.

We hope our feedback will be helpful and we would like to extend our support for successful implementation of the scheme.

Best Regards  
Muhammad Zubair

Best Regards,



Muhammad Zubair | Chief Engineer, SFL Dyeing-Denim

M: +92-300-4005137 | UAN: +92-42-111-000-100 Ext. 3802

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**3. Minutes of Meeting held with NEECA MD, on feedback received from stakeholders**



## **Minutes of Meeting**

**Date:** 20.05.2020

**Participants:**

**TERI:**

Mr. K. K. Chakarvarti

Mr. D. Ramesh

Mr. C. Vijayakumar

Ms. Sabreen Ahmed

**NEECA:**

Mr. Sardar Mohazzam

Mr. Asad Mahmood

**Agenda:** Discussion on feedback from stakeholders and International expert on regulations for “Certification Procedure for Energy Auditors and Managers” and “Qualifications, criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and maintenance of their list”

Start time: 1:00 PM Pakistan time (1:30PM India Time)

TERI team gave a brief background of the methodology adopted for collecting feedback, the numbers of stakeholders contacted and responses received. Each feedback was discussed in details and same is given as Annexure 1.

All stakeholder feedbacks were discussed within the 2 hour duration but international expert feedback could not be discussed. Hence it was mutually agreed to schedule another meeting to cover the same.

The accepted suggestions during the meeting have been incorporated in the draft report.

The meeting ended at 3:00 PM Pakistan time (3:30 PM India time).

Annexure 1: Detailed discussion of each stakeholder feedback.

## **Annex 1:** Detailed discussion on each stakeholder feedback



# National Certification Scheme for Energy Auditors in Pakistan

UNIDO-CTCN Project

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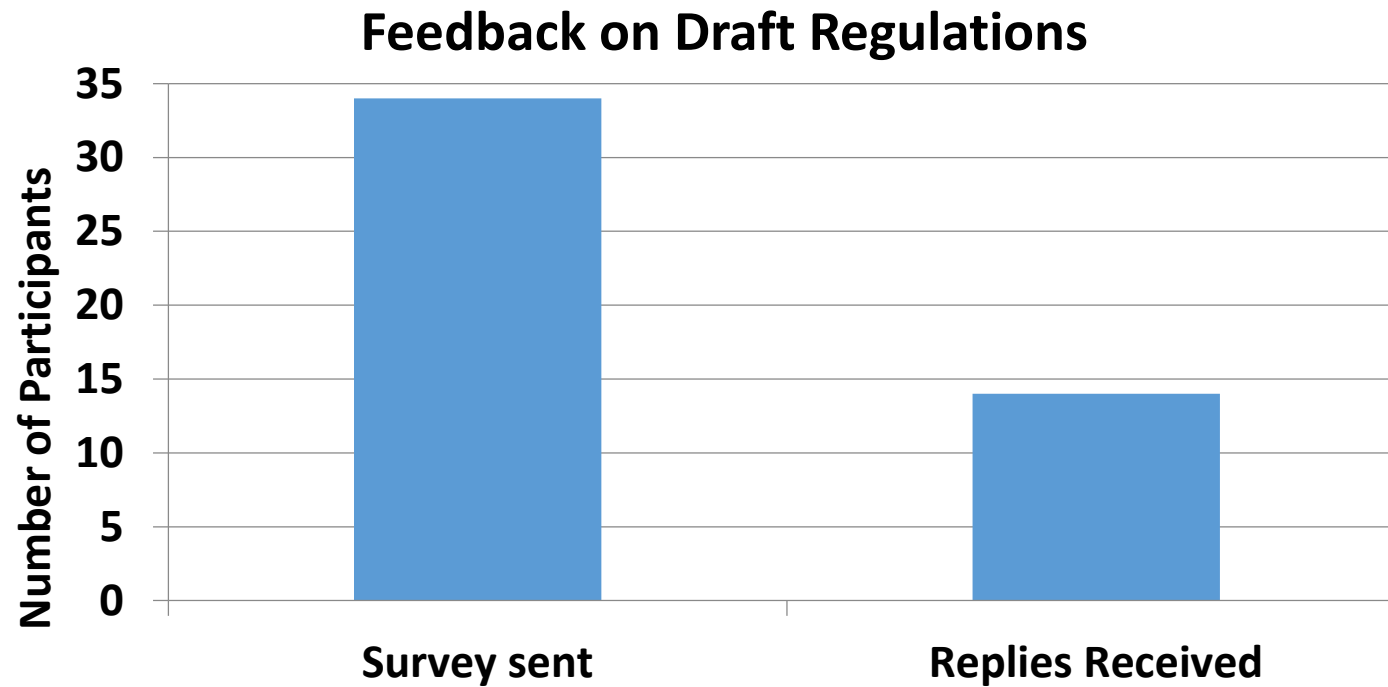
# Contents

- 1. METHODOLOGY**
  - 2. FEEDBACK ON “Certification Procedure for Energy Auditors and Managers”**
  - 3. FEEDBACK ON “Qualifications, criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and Maintenance of their list”**
-

## Methodology

- ✓ **PITCO with support from NEECA shared draft guidelines with 33 stakeholders from various industries, industrial associations, universities, funding agencies etc.**
  - ✓ **Repeated follow-ups carried out by NEECA**
  - ✓ **Feedbacks received from 14 stakeholders**
-

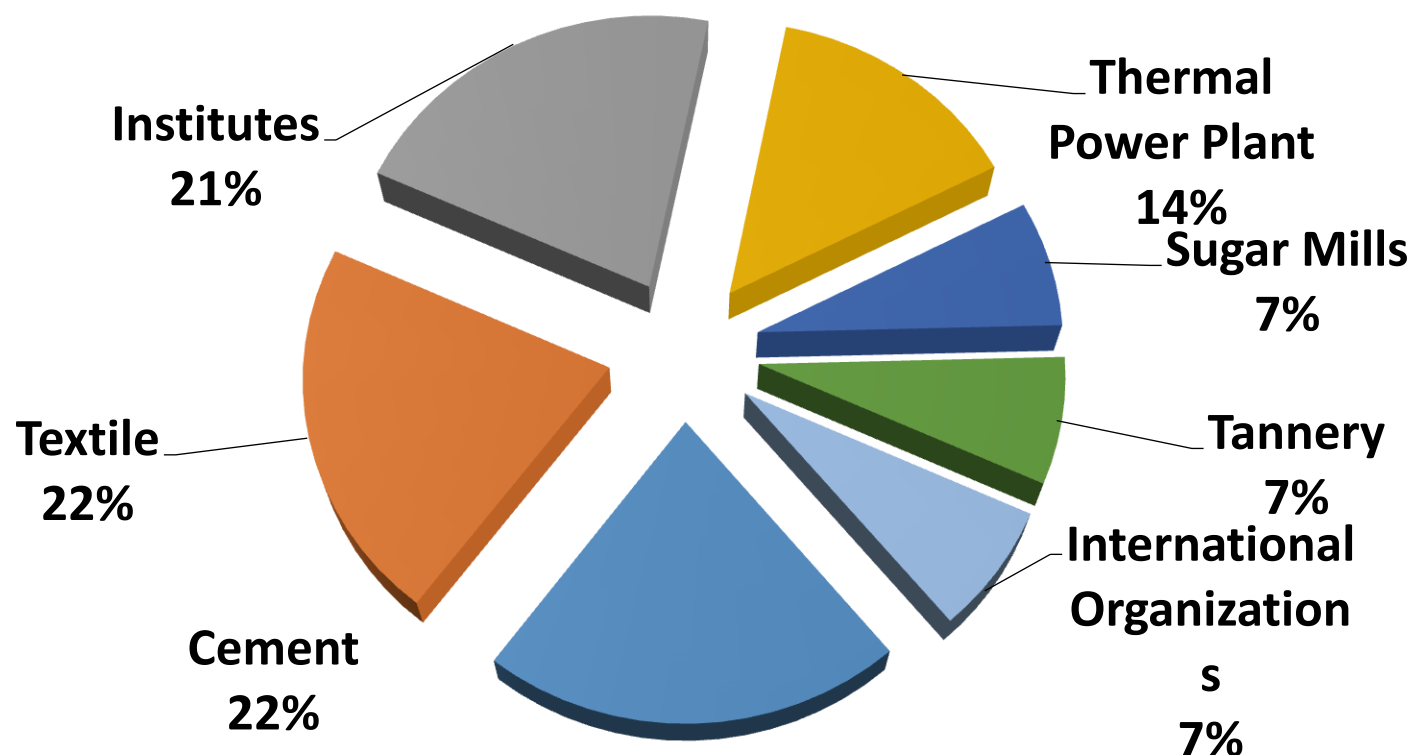
## Feedback Statistics



## Phase 1 of Survey

Industry / Sector	Survey sent	Replies Received
Cement	5	3
Thermal Power Plant	3	2
Sugar Mills	6	1
Textile	7	3
Fertilizer	2	0
Tannery	1	1
Steel	1	0
Brewery	1	0
Suppliers	1	0
Institutes	3	3
Pulp and Paper	1	0
Packaging	2	0
International Organizations	1	1
Total	34	14

## Classification of respondents





## Phase 2 of Survey

Industry/sector	Stakeholders contacted
Cement	18
Textile	7
Thermal Power Plant	21
Sugar Mills	7
Tannery	1
Fertilizer	2
Steel	1
Institutes	4
International Organizations	1
Brewery	1
Suppliers	1
Pulp and Paper	1
Packaging	2
Government	10
Associations	28
Total	105

# **FEEDBACK ON “Certification Procedure for Energy Auditors and Managers”**

## Kashmir Power and SM, Al Shafi Group, Lahore:

- 1) Clause (a) sub Rule (6), Rule (5): “The candidate appearing in national examination for energy manager shall be required to qualify the three papers specified in the above Table - Paper-I, Paper-II and Paper-III.”

### **Suggestion:**

- Initially it will be two and may be increased after word.

### **Discussion during meeting:**

**TERI:** Paper 1 comprises Pakistan energy scenario, Pakistan EC Act, Financial Calculations, ESCO model etc. Paper 2 comprises thermal energy components like boilers, furnaces, steam systems, fuels and combustion etc. Paper 3 comprises electrical energy components like electrical systems, electric motors, compressed air system, HVAC system, pumps, fans etc. Thus it was agreed to keep all three papers as they are of utmost importance.

## Kashmir Power and SM, Al Shafi Group, Lahore:

- 2) Para (2), Rule (10): “Provided that no such renewal shall be made unless the certified energy manager has attended a short-term refresher training course conducted by the Authority or the agency, as the case may be, and has produced a certificate of participation issued in that behalf.”

### **Suggestion:**

- The short courses should be provided by the NEECA on FOC basis.

- 3) Clause (d) sub Rule (1), Rule (11): “failure to attend the refresher course.”

### **Suggestion:**

- No need for this condition for the EM.

## Kashmir Power and SM, Al Shafi Group, Lahore:

### Discussion during meeting:

**TERI:** International expert shared his experience and the practical difficulties in conducting refresher courses as many energy auditors who might have travelled abroad for jobs cannot travel back to their country only for attending refresher training. Mr. K.K. Chakarvarti suggested that online webinars for refresher course can be conducted. Conducting refresher course free of cost will require a sizeable investment from NEECA. Updating knowledge of the EA and EM is required but NEECA has to decide whether to make refresher course mandatory or not and also if it is to be conducted free of cost or paid basis.

## Bestway Cement, Kalar Kahar

- 1) Sub Regulation (1), Regulation (6): “The Authority, or the agency, as the case may be, shall, after scrutiny of application form and being satisfied that the applicant is eligible to appear for the National Examination, admit him for the National Examination by issuing him registration number EA or EM as the case may be, an admission card stating the place, date and time of the National Examination at least fifteen days before the date of the National Examination. The admit card can also be downloaded from the Authority website.”

### Suggestion:

- Date sheet may be sent at least one month (instead of before 15 days) before the date of the National Examination to the eligible applicant.

### Discussion during meeting:

**TERI:** The date sheet consisting of dates for all four papers need to be given 3 months in advance. Examinations can be conducted on weekends and two papers can be covered per day. Admit cards can be generated online with photos. All candidates to carry photo ID proofs.

## Bestway Cement, Kalar Kahar

- 2) Sub Regulation (2), Regulation (6): “Where on scrutiny of the application under sub-regulation (1) of regulation 6, an applicant is found ineligible to appear for National Examination, his application shall be rejected for reasons to be recorded in writing and he shall be intimated accordingly.”

### **Suggestion:**

- Non eligible applicants should be informed before issuing of examination date sheet.

### **Discussion during meeting:**

**TERI:** Within 15 days of receipt of application, if any discrepancy is observed, same to be shared with the applicant.

## Bestway Cement, Kalar Kahar

- 3) Sub Regulation (2), Regulation (7): “An unsuccessful candidate shall be allowed to take a maximum of three/four attempts per paper within six consecutive examinations held by the Authority or the agency, as the case may be, on payment of supplementary fee of rupees one thousand and five hundred per paper by means or demand draft drawn or through payment gateway on authority website in favour of National Energy Efficiency and Conservation Authority, Islamabad. Registration of the candidate for the National Examination will be treated as first attempt irrespective of the fact whether candidate writes the examination or not.”

### **Suggestion:**

- Time line should be fixed either three or four attempts whatever is feasible.
- “Writes” may be replaced with appear or this sentence may be clearly defined.



## Bestway Cement, Kalar Kahar

### Discussion during meeting:

**TERI:** As per International expert's experience, 3 attempts are not sufficient. When candidate registers, it is considered as 1<sup>st</sup> attempt. Thus only 2 more attempts are available for clearing all the papers. Hence it is suggested to provide 4 attempts.

The word "writes" needs to be kept to avoid ambiguity regarding how the number of attempts are counted. Even if a candidate applies for supplementary examination but does not write the examination, it is not considered as an attempt.

## Bestway Cement, Kalar Kahar

- 4) Sub Regulation (1), Regulation (12): “Where the certificate or identity card issued respectively under regulation 8 and sub regulation (2) of regulation 9 has been lost by the Energy auditor or certified energy manager; the Authority may, on an application made by him in this behalf, duly supported by a copy of first information report lodged with the concerned police station, issue a duplicate certificate or identity card, as the case may be, on payment of a fee of rupees one hundred/five hundred by demand draft drawn in favour of National Energy Efficiency and Conservation Authority, Islamabad.”

### **Suggestion:**

- Fee should be rupee 100 in either case certificate or identity card.

### **Discussion during meeting:**

**TERI:** Fee of Rs. 100 can be retained as only the cost of issuing new electronic identity card or certificate of re-issue is to be met.

## Bestway Cement, Kalar Kahar

- 5) Sub Regulation (1), Regulation (13): “The Authority may, for the purpose of these regulations, national examination for energy auditors and energy managers and for their certification and registration constitute an Examination Advisory Committee, a Technical Advisory Committee and a Certification and Registration Advisory Committee.”

### **Suggestion:**

- The criteria to be defined to constitute for Examination Advisory Committee, Technical Advisory Committee and Certification and Registration Advisory Committee Chairpersons and its members to avoid any misunderstanding or ambiguity..

## Bestway Cement, Kalar Kahar

### Discussion during meeting:

**TERI:** Mr K.K.Chakarvarti mentioned that instead of having three separate committees, it is better to have an Examination Advisory Committee, with support extended by a Technical Advisory Committee.

**MD, NEECA** suggested having a Technical Advisory Committee, with sub committees like Examination Advisory Committee and Certification Advisory Committee. The Technical Advisory Committee need not meet on a regular basis but on a case to case as per requirement basis.

## Sustainable Development Policy Institute, Islamabad

- 1) Sub Rule (1), Rule (8): “For the purpose of certification of energy auditors and energy manager, the Authority shall issue a certificate in Form-II to the person who has passed the said National Examination.”

### **Suggestion:**

- Certificate should have dates of issue & validity/expiry be mentioned on the document;

### **Discussion during meeting:**

**TERI:** Dates are generally mentioned on certificate. A sample copy of certificate to be shared with NEECA.

## Sustainable Development Policy Institute, Islamabad

- 2) Para (2) Rule (10): “Provided that no such renewal shall be made unless the certified energy manager has attended a short-term refresher training course conducted by the Authority or the agency, as the case may be, and has produced a certificate of participation issued in that behalf.”

**Suggestion:**

- Refresher course charges to be included as/in the “Fee for Renewal”.

**Discussion during meeting:**

**TERI:** NEECA needs to take a call on whether refresher courses are needed. If needed then whether to make it free of cost or chargeable.

## Thall Industries (Almoiz, Safina & Layyah Sugar Mills)

### Suggestion:

- EM and EA should also have expertise in the manufacturing process of the industry in which he/she is going to appoint with at least 5-10 years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation.

### Discussion during meeting:

**TERI:** If 5-10 years of manufacturing process expertise is required, the number of eligible candidates will be very low. Moreover as an energy auditor/manager, energy consumption in all sections; process, utility etc. needs to be covered. Book 4/Paper 4 comprises of sector specific chapters focusing on Thermal Power Plants, Cement Plants, Textile Plants, Pulp and Paper Industry and Steel Re-rolling Mills. Thus Book 4 will give a broad idea to the energy auditor about the process and the type of energy consumption.

## UNIDO, Pakistan

- 1) Rule 10: Validity of certification – The certification made under regulation 8 shall be valid for a period of five years and renewable after every five years on an application made to the Authority in Form V.

### Suggestion:

- The renewal of certification shall be after 3 years instead of 5.

### Discussion during meeting:

**TERI:** Practically very difficult to organise every 3 years. Five year time span is better.

**MD, NEECA:** Previous fifteen years, speed of innovation was tremendous, but it varies from sector to sector. Better to leave on Technical Advisory Committee to decide on time period.

**TERI:** NEECA can also have Knowledge Exchange Platforms, funded by bilateral and multilateral organisations which organise workshops twice a year to educate EA and EM about latest innovation in technology.



## UET Taxila

- 1) Clause (e), Sub-rule 2, Rule 3: Qualification of Certified Energy Auditor and Certified Energy Manager - a post-graduate in Physics or Electronics or Chemistry (with Physics and Mathematics at graduation level) with three years of work experience involving use of energy in operation, maintenance, planning, energy management, energy efficiency and energy conservation.

### Comment:

- How this experience can be equal to the professional engineer experience? I think it should be modified; otherwise, we will open the doors of non-professionalism in this field.
- Further, there is dire need to re-examine the eligibility criteria and experience requirement.

### Discussion during meeting:

**MD, NEECA:** Do not agree in principal with UET, Taxila. In sectors like sugar manufacturing, mostly science graduates are employed.

## Uch I & II Power (Private) Ltd, Uch Power Station, Dera Murad Jamali

### Minimum Qualification for Energy Manager and Energy Auditor.

#### Suggestion:

- No age limit for energy manager or energy Auditor eligibility criteria.

#### Discussion during Meeting:

**TERI:** Age limit not set as it gives opportunity to retired professionals to use their knowledge and experience to gain the certification and assist industries in arriving at energy savings.

**MD, NEECA:** Agreed, need not have age limit.

**FEEDBACK ON “Qualifications, criteria and conditions subject to which a person may be accredited as an energy auditor and the procedure for such accreditation and Maintenance of their list”**

## Pioneer Cement, Lahore

- 1) Clause (b) sub regulation (1), Regulation (3): “experience of five years in the field of energy audit in any Sectors of Economy and out of which at least three years shall be in the large energy consuming enterprises”

And

Clause (c) sub regulation (1), Regulation (3): “undertaken and completed at least five detailed energy audit reports in any of the sectors referred to in clause (b) above in an individual capacity or as a leader or associate or active team member of the energy audit team”

### **Suggestion:**

- Since it is a new exercise, five year experience may be reduced to four years for the companies.

## Pioneer Cement, Lahore

- 2) Clause (a) sub regulation (2), Regulation (4): “Five detailed energy audit reports in any of the sectors referred to in clause (b), sub-regulation (1) of regulation 3 in an individual capacity or as a leader or associate or active team member of the energy audit team”

And

Clause (b) sub regulation (2), Regulation (4): “the feedback on 5 energy audit reports submitted to the Authority, referred to in clause (a), shall be from the respective clients, whose energy audits were conducted”

### **Suggestion:**

- The number of detailed energy audit reports and feedback can be reduced to four to encourage local companies.
- The guidelines for qualification and certification procedures for the individual and the companies including various clauses outlined except few comments as noted above are acceptable.

## Pioneer Cement, Lahore

### Discussion during meeting:

**TERI:** Valid suggestion and for few initial years, experience of 4 years can be kept. The 4 years of experience can also be before getting certified as an energy auditor.

**MD, NEECA:** To create a pool of accredited energy auditors, for initial years of implementation of the scheme, an experience of 3 years also should be sufficient. In place of 5 reports, 4 reports can also be considered.



## USPCAS-E NUST, Islamabad

- 1) Clause (a) sub regulation (1), Regulation (3): *“valid certificate for energy auditor under regulation 8 the National Energy Efficiency and Conservation Authority (Certification Procedures for Energy Auditors and Energy managers) Regulations 2018”*

### **Suggestion:**

- Provision should include possibility to adoption of international certifications as well, as in the beginning, critical mass of auditors will be provided through already certified auditors through international agencies i.e. APO, PEE etc.

### **Discussion during meeting:**

**TERI:** Better to have a uniform criteria for all within the country. The persons with international certification can also take the National Certification Examination and obtain certification.

**MD NEECA:** Better not to involve other international certification agencies at this stage.

## USPCAS-E NUST, Islamabad

- 2) Clause (b) sub regulation (1), Regulation (3): “experience of five years in the field of energy audit in any Sectors of Economy and out of which at least three years shall be in the large energy consuming enterprises”

### **Suggestion:**

- Provision of 5 year of energy audit experience is sufficient. Otherwise definition needs to be provided regarding large energy consuming enterprise.

- 3) Clause (e) sub regulation (1), Regulation (3): *“been granted a certificate of accreditation by the Authority under regulation 6.”*

### **Suggestion:**

- The regulations should address the manner in which certificate of accreditation will be issued.



## USPCAS-E NUST, Islamabad

### Discussion during meeting:

**TERI:** Experience already covered in previous feedback. Large energy consuming enterprises to be defined in regulation.

Regarding manner of issuance of certificate of accreditation, once the Certified Energy Auditor clears all criterions ,certificate will be issued online .

## Bestway Cement, Hattar

- 1) Clause (b) sub regulation (1), Regulation (3): “experience of five years in the field of energy audit in any Sectors of Economy and out of which at least three years shall be in the large energy consuming enterprises”

### **Comment:**

- If first energy auditors in the country are bound with 05 year experience of energy audits, then energy management system can't be implemented without importing energy auditors with 05 year experience.

### **Discussion during meeting:**

**TERI:** Covered in previous feedbacks. As suggested by MD, NEECA, years of experience can be reduced to 3 years. Experience before certification can also be considered.

## Bestway Cement, Kalar Kahar

### 1) Regulation (4): “Procedure for grant of certificate of accreditation”

#### **Suggestion:**

- Time line should be fixed for grant of certificate of accreditation, otherwise this procedure will be endless.
- 2) Sub regulation (3), Regulation (7): “The Authority shall cause to be published the first list of accredited energy auditors and list of offices and firms of accredited energy auditors as soon as they are finalized and thereafter these lists shall be updated and published regularly and uploaded on the Authority’s official website”

#### **Comment:**

- Time lines should be fixed rather than regularly.

## Bestway Cement, Kalar Kahar

### Discussion during meeting:

**TERI:** Mr. K.K. Chakarvarti mentioned that fixing a timeline is an excellent suggestion and needs to be incorporated. The accreditation process involves submission of energy audit reports and list of equipment available with the applicant. The reports are checked for quality purpose by a panel of professionals. After completion of this process, the applicant needs to appear for oral examination to assess his/her communication skills, as accredited energy auditors will be communicating with top management in industries. Moreover an accredited energy auditor is one who has been declared by NEECA as a competent professional.

**MD, NEECA:** Cost of carrying out oral interview will be high but it is of prime importance to conduct the oral interview for quality purpose.

## Sapphire Fibers Limited, Lahore

- Energy Managers and Energy Auditors are to be trained by NEECA, with the help of international trainers and expert, on how to conduct the measurements, audit and assessment of the savings.
- Designated consumers notification must be carried out after three to four years, after initial qualification of the few Energy manager and Energy auditors.
- NEECA should provide a few audits in the plants, free of cost and training the auditors and plant personnel.
- As most of the Forms requires Energy managers and Accredited energy auditor signature, initial training in the examination with coaching is required.

## Sapphire Fibers Limited, Lahore

### Discussion during meeting:

**TERI:** Though most suggestions are generic but are of utmost importance. Hand holding of the energy managers and auditors along with designated consumers is required. NEECA can develop *Knowledge Exchange Platforms* and can also explore the option of conducting friendly energy audits in industries. In addition, NEECA can discuss with JICA and develop a training facility for energy auditors in line with the centres in Chennai and Turkey.

**MD, NEECA:** NEECA had a few high level discussion with JICA regarding the same and will definitely look into further options.

## Interloop, Lahore

### Suggestion:

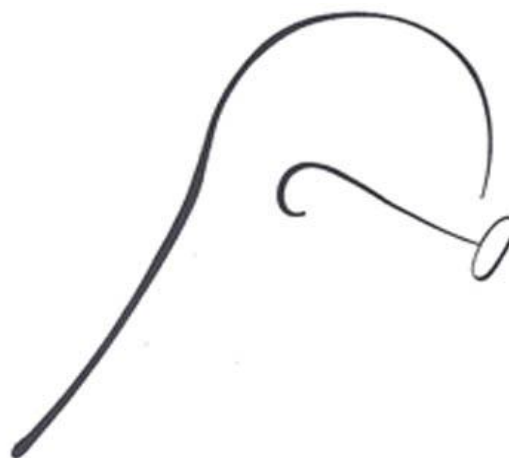
- If the organization has ISO 50001 Lead Certified Auditors on their payroll, they shall be allowed to internally conduct Energy Audit/cover some specific scope of audit on their own.

### Discussion during meeting:

**TERI:** ISO 50001 Lead Certified Auditors have different skills set in comparison with an energy auditor or manager. Moreover energy audit conducted by internal person might lead to biased results.

**MD, NEECA:** Agreed to the observation by Mr. K.K. Chakarvarti.

**Thank you**



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