



Government of Pakistan

National Electricity Policy 2021





Government of Pakistan

National Electricity Policy 2021

TABLE OF CONTENTS

1. PREAMBLE

2. VISION

3. GOALS FOR THE POWER SECTOR

3.1. ACCESS TO AFFORDABLE ENERGY.....	2
3.2. ENERGY SECURITY.....	2
3.3. SUSTAINABILITY.....	2

4. KEY GUIDING PRINCIPLES

4.1. EFFICIENCY.....	3
4.2. TRANSPARENCY.....	3
4.3. COMPETITION.....	3
4.4. FINANCIAL VIABILITY.....	3
4.5. INDIGENIZATION, RESEARCH & DEVELOPMENT.....	3
4.6. ENVIRONMENTAL RESPONSIBILITY.....	4

5. POLICY DIRECTION FOR THE POWER SECTOR

5.1. GENERATION.....	4
5.2. TRANSMISSION.....	6
5.3. DISTRIBUTION AND SUPPLY.....	6
5.4. SYSTEM OPERATIONS.....	7
5.5. MARKET DEVELOPMENT AND OPERATIONS.....	8
5.6. COST OF SERVICE, TARIFF AND SUBSIDIES.....	10
5.7. ENERGY EFFICIENCY AND CONSERVATION.....	11
5.8. INTEGRATED PLANNING.....	11
5.9. GOVERNANCE.....	12

6. POLICY IMPLEMENTATION

6.1. IMPLEMENTATION.....	13
6.2. MONITORING.....	13
6.3. APPLICABILITY, REVIEW AND UPDATING.....	14

INTERPRETATION OF TERMS

Unless the context otherwise requires, terms used in this National Electricity Policy are assigned the following meaning:

1. **Alternative and Renewable Energy Policy 2019** – The renewable energy policy of the Government of Pakistan, approved by the Council of Common Interests, in the year 2020
2. **BOT** – Build Operate Transfer
3. **BOOT** – Build Own Operate Transfer
4. **CCI** – Council of Common Interests
5. **CTBCM** – Competitive Trading Bilateral Contract Market
6. **DFI** – Development Finance Institution
7. **Government** – The Federal Government of Pakistan
8. **IGCEP** – Indicative Generation Capacity Expansion Plan¹ (the rolling generation capacity expansion plan for future ten years to be prepared under the grid code by the relevant entity and approved by the Regulator every year)
9. **National Electricity Plan** – The Plan to be developed by the Federal Government in terms of Section 14A of the NEPRA Act
10. **National Electricity Policy** – This National Electricity Policy 2021
11. **National Power Policy 2013** – The National Power Policy of the Government of Pakistan, approved by the Council of Common Interests, in the year 2013
12. **NEECA** – National Energy Efficiency and Conservation Authority
13. **NEPRA Amendment Act** – Regulation of Generation, Transmission and Distribution of Electric Power (Amendment) Act, 2018
14. **NGC** – National Grid Company
15. **PGC** – Provincial Grid Company
16. **Power Generation Policy 2015** – The power generation policy of the Government of Pakistan, approved by the Council of Common Interests, in the year 2015
17. **Provincial Government** – The Government of one of the Provinces
18. **PPP** – Public Private Partnership
19. **R&D** – Research and Development

¹ The IGCEP has not been approved by the Regulator at the time of approval of this policy. For the first iteration, IGCEP assumptions will be approved by the CCI.

20. **Regulator** – National Electric Power Regulatory Authority (NEPRA)
21. **SCADA** – Supervisory Control and Data Acquisition system
22. **SDGs** – Sustainable Development Goals as adopted by the United Nation member states in 2015
23. **SPTL** – Special Purpose Transmission Licensee
24. **TSEP** – Transmission System Expansion Plan (the rolling transmission system expansion plan which may be prepared for one, three, five or ten years into the future under grid code by the NGC and approved by the Regulator, in consultation with the Provincial Governments)

1. PREAMBLE

- 1.1. Supply of reliable, secure, efficient and affordable electricity is one of the primary drivers for sustainable growth of a nation's economy.
- 1.2. In the past, electricity shortfalls have adversely impacted the socio-economic balance of the country. The Government framed various policies, from time to time, to address such issues, including but not limited to policies for the generation and transmission sectors. The National Power Policy 2013 encompassed all three sub-sectors, i.e. generation, transmission and distribution, and provided policy goals, targets and guidelines for the sector. However, on account of multifarious reasons, the implementation of policy initiatives has focused primarily on the generation sub-sector. Hence, the goals and targets set for the power sector have not been met in totality.
- 1.3. Lately, the NEPRA Amendment Act has been promulgated to set foundation for the development of an integrated, sustainable and competitive power market. Accordingly, as envisaged in Section 14A of NEPRA Amendment Act, the Government has prepared the National Electricity Policy for the development, reform, improvement and sustainability of the power market and power sector.
- 1.4. The National Electricity Policy identifies the major goals sought to be achieved for the power sector, and in this respect, provides policy directions. It also provides the key guiding principles to develop subservient frameworks that will steer the decision-making in the power sector to achieve identified goals. However, plans for implementation or specific operational instructions have not been prescribed, which shall be prepared by the Government in the form of periodic National Electricity Plans. Such plans may also provide guidelines for specific initiatives for a particular sub-sector / segment of the power sector.

2. VISION

To ensure universal access of electricity through a self-sustainable power sector, developed and premised on: optimal utilization of indigenous resources; integrated planning approach; efficient, liquid and competitive market design; and affordable & environment friendly outcome for the consumers.

3. GOALS FOR THE POWER SECTOR

Access to affordable, secure and sustainable energy are the broad and overarching goals, attainment of which will crystallize the vision of the Government for the power sector. None of these goals is subservient to any other; all actions taken pursuant to this National Electricity Policy will ensure balanced implementation that does not prejudice any one goal for achieving any of the others, while ensuring alignment with the SDGs. In discharging their respective functions, the Government, the Regulator and all sector entities, including provincial entities, will be guided by these goals so

as to overcome the challenges and impediments faced by the power sector and to devise future plans of action.

3.1. ACCESS TO AFFORDABLE ENERGY

3.1.1. Accessibility of electric supply to all areas, including rural areas, at affordable rates is the cornerstone of socio-economic development. Making power available, when it is not affordable, has limited value. The Government shall strive to ensure that electricity is accessible to all consumers at rates which commensurate with their ability to pay, coupled with development of an efficient and liquid market design. A liquid market design and affordable supply of electricity would also contribute vastly to the financial turnaround and commercial viability of the power sector.

3.2. ENERGY SECURITY

3.2.1. Energy security, including uninterrupted availability of energy sources, is an essential goal for the power sector. The Government shall endeavor to diversify the fuel mix of the generation capacity in the country, through optimal utilization of energy resources, such as hydro, renewable sources, coal, natural gas and nuclear.

3.3. SUSTAINABILITY

3.3.1. The sustainability of the power sector is of paramount importance, and all sector entities shall strive to take such steps as are required to ensure such sustainability. This shall include: measures to minimize environmental degradation, technical and operational sustainability, integrated development of the power sector, and financial self-sustainability, including progressive elimination of circular debt. The energy intensity optimization, coupled with enhanced energy efficiency and conservation measures, will also contribute towards overall sustainability.

4. KEY GUIDING PRINCIPLES

Six principles shall inform the actions and plans for the power sector so as to enable it to achieve the goals identified above:



4.1. EFFICIENCY

- 4.1.1. Efficiency will be progressively increased across the entire value chain of the sector. This will be done, broadly, by gradually improving efficiency in the generation fleet and system operations, optimum utilization of the fuel base, reduction in Transmission and Distribution (T&D) losses and improvement in collections, demand side management, conservation, sound governance practices including decentralization, etc.

4.2. TRANSPARENCY

- 4.2.1. Transparency is one of the core values of the power sector and is a sine qua non to attract investment. Transparency also enhances consumer confidence, and resultantly, improves the liquidity of the sector. Transparency will be ensured through a predictable policy framework, uniform application of regulatory framework, elimination of institutional conflict of interest, automation & digitization of processes and adopting best practices for dissemination of authentic and timely information to all the stakeholders.

4.3. COMPETITION

- 4.3.1. Competition contributes towards improving quality, increasing efficiency and reducing costs. Enhancement of competition in the sector will provide steppingstones for transition into a competitive wholesale market. Competition shall be the cornerstone for development and operations of the entire value chain of the power sector.

4.4. FINANCIAL VIABILITY

- 4.4.1. Sustainability of the entire power sector pivots around the financial and commercial viability of its individual sub-sectors. This will be done by:
- a. promoting investments on least cost basis balanced with development in the underserved areas;
 - b. having cost-reflective tariffs in transmission and distribution, to the extent feasible;
 - c. timely passing of costs to the consumers, while netting off any subsidies funded by the Government; and
 - d. recovery of costs arising on account of open access, distributed generation, etc.

4.5. INDIGENIZATION, RESEARCH & DEVELOPMENT

- 4.5.1. A multi-pronged approach for indigenization will be adopted, which shall include promoting local content, transfer of technology, and R&D across the value chain of the power sector. This may also include Government to Government and Business to Business agreements, through which the Government or private entities / parties in Pakistan shall promote transfer of technology. Further, steps will be taken to facilitate creation of development funds to support domestic R&D as well as resources needed for augmentation of indigenous capacity.

4.6. ENVIRONMENTAL RESPONSIBILITY

- 4.6.1. Environmental responsibility is recognized worldwide as a vital pillar to ensure the overall sustainability of a power sector. Therefore, all aspects of the sector shall be guided by environmental targets benchmarked with international commitments, including carbon footprints (decarbonization) and emission targets for the sector in line with Pakistan's commitment to reduce and limit greenhouse gas emissions.

5. POLICY AREAS FOR THE POWER SECTOR

The National Electricity Policy identifies nine areas of the power sector, in which all actions shall individually and collectively be aimed at attaining the above-mentioned goals by applying the key guiding principles, thereby, achieving the vision for the power sector.

5.1. GENERATION

- 5.1.1. Sustainable development of the power sector requires that despite varying seasonal energy requirements, sufficient generation capacity be made available to cater for the peak demand of the country. The sharing of investment risks and rationalization of related returns in view of applicable market conditions shall inform the generation capacity additions. Such additions shall also reflect principles of integrated, coordinated and sustainable supply of electricity (detailed in Section 5.8), with the aim of optimal utilization of resources across the entire value chain. Expansion in generation capacity shall be only on competitive and least cost basis (except for strategic projects, for which: (a) the qualification and methodology shall be provided in the National Electricity Plan, (b) the Government, in consultation with the Provincial Governments, shall approve such projects on case-to-case basis and (c) the relevant sponsoring Government / Provincial Government shall provide the funding to bridge the incremental cost (beyond least cost) of any such project). Further, in order to determine the basis of least cost and to ensure that the consumer gets the cheapest electricity, while ensuring levelized tariff for different fuels/technologies, the Government shall conduct necessary consultations with the Provincial Governments on parameters / basis / assumptions at the time of development of generation framework.
- 5.1.2. The generation mix for the sector shall gradually reduce reliance on imported fuels and shall move towards optimal utilization of local resources such as coal, hydro, renewable sources, local gas, and nuclear. Such generation mix decisions will be made as per system of integrated planning (detailed in Section 5.8), with the aim of transitioning towards a more clean, affordable and secure generation mix.
- 5.1.3. Only run-of-river hydropower projects i.e., where irrigation, flood control & seasonal storage are not involved, will be developed, unless otherwise specifically permitted by the Government in consultation with the concerned Province and with the approval of the CCI. The run-of-river projects may have some ponding facility for absorption of daily flow fluctuation and for daily peaking operation of the power plant. The project should be designed and implemented with a view of optimum utilization of potential of the site.

- 5.1.4. Nuclear generation capacity additions, subject to provisions stipulated in Section 5.1.1, shall be incorporated in the IGCEP on the basis of cross-sectoral decisions by way of consultative process, taking into account *inter alia*, economics of generation, resultant tariff, and demand of the sector.
- 5.1.5. A sustainable renewable energy market shall be developed, with a progressively increasing share in power generation as per the IGCEP based on least cost principle. For such market development, zone-based renewable resource assessment shall be carried out to identify / prioritize renewable zones on the basis of, *inter alia*, optimized levelized cost and firm capacity. Future procurement of renewable generation will be based on such assessments. The emphasis shall be on introducing measures to encourage and promote transfer of technology, so that local capabilities are developed for the renewable energy market.
- 5.1.6. Effective utilization of local coal and gas resources shall be promoted for power generation on the principles of least cost and competition.
- 5.1.7. Distributed generation, including net-metering additions, shall conform to the integrated planning for the sector. Steps will be taken to integrate distributed generation in sector-level planning to ensure its sustainability.
- 5.1.8. Existing public-sector thermal plants shall be reviewed and assessed for privatization, leasing or other options for their possible future integration in the wholesale electricity market, or retirement. The mechanism for assessment and subsequent implementation roadmap shall be stipulated in the National Electricity Plan. Such implementation mechanism shall account for the social aspects of employee related matters including, but not limited to relocations, absorption in other public sector companies, continuation of employment for specified periods on the same terms and conditions, etc.
- 5.1.9. This National Electricity Policy shall prevail over the Power Generation Policy 2015 to the extent of any conflict or inconsistency. The remaining policy directives of the Power Generation Policy 2015 shall continue to remain in field till the same is superseded by a revised generation policy to be approved by the CCI.
- 5.1.10. Subject to Article 157(2) of the Constitution, the Provincial Governments may make their own electricity policies (including generation, transmission & distribution) and execute related projects within their boundaries without the requirement of selection by IGCEP, as long as such projects are not connected to the national grid and do not impose any obligation on any Federal Government entity. Such projects can subsequently be connected to the national grid, subject to the consent of the Federal Government, based on the principle of least cost and selection by IGCEP.
- 5.1.11. Subject to Alternative and Renewable Energy Policy 2019, as amended from time to time, the concerned Government entity may issue a letter of support to the projects, that have been issued letters of intent by the Provincial Governments till June 20, 2021, and intend to sell electricity to a Government entity, if such projects are selected by IGCEP.

5.2. TRANSMISSION

- 5.2.1. The transmission network serves as the backbone for a sustainable and secure sector, which enables delivery of affordable electricity. Efforts shall be made for development of a robust transmission network which complements generation plans for smooth dispersal of power between generating stations and load centers. Such integration will ensure smooth operations of the power sector, while avoiding congestions and blackouts / brownouts.
- 5.2.2. Subject to Article 157(2) of Constitution of Pakistan and law, the Provincial Governments shall have the powers to construct grid stations, lay transmission lines, and engage in the transmission of electric power within the territorial limits of such Province. Wherever the Province intends to connect its transmission system to the national grid, the NGC will be solely responsible for the centralized TSEP. The TSEP shall provide for integration of the national and provincial transmission systems. For such integration, the PGCs and SPTLs shall coordinate with the NGC and provide all relevant data required by the NGC, at the conception stage prior to any execution, to prepare the TSEP. The NGC, PGC and SPTL, while discharging their respective responsibilities, shall ensure compliance with TSEP approved by the Regulator.
- 5.2.3. Different financing or investment options may be explored by the NGC to facilitate expansion of the transmission network, including financing / investment by Provincial Governments, PPP models and Government to Government arrangements. All developments under the PPP model will be carried out on competitive basis, providing equal opportunity to all interested parties.
- 5.2.4. The transmission network operator may be restructured or reformed so as to achieve the policy directives set forth herein, or through any instrument or design developed / approved in pursuance of this National Electricity Policy.
- 5.2.5. Information related to the approved TSEP shall be made public by the NGC on a timely basis.

5.3. DISTRIBUTION AND SUPPLY

- 5.3.1. The distribution segment is the interface of the entire sector with the consumers of electricity. The financial viability of the entire sector is premised on the efficient operations of the distribution system and timely recoveries from consumers. The existing operations have resulted in non-recovery of costs determined by the Regulator (in addition to operational costs over and above the revenue requirement determined by the Regulator), leading to accumulation of circular debt, thus threatening the sustainability of the entire sector.
- 5.3.2. So as to ensure and put in place efficient tariff structures for sufficient liquidity in the power market, the target for losses and collections shall be revisited by the Regulator, in order to align the same with the current market realities. These targets shall be reflected in the determinations of the Regulator. Moreover, timely recovery of bad debt that is prudent shall be allowed by the Regulator with the incorporation of facilitative provisions in the regulatory framework as per industry practices and procedures.

- 5.3.3. For the purpose of assistance to the relevant entities in achieving such benchmarks / targets, appropriate interventions from other state entities as well as Provincial Governments shall be sought in a timely manner. Provincial Governments shall provide all necessary support to the power sector entities for, inter alia, recoveries, bill collection, theft detection and legal procedures / actions. Specific measures shall also be introduced for accountability of staff of the distribution companies, with the aim of meeting such benchmarks / targets determined by the Regulator. Further, in order to reduce the menace of circular debt, the Government will institutionalize anti-theft initiatives and efficient recovery systems with the support of law enforcement agencies.
- 5.3.4. In order to ensure implementation of duly approved efficient market design, and accordingly, to promote development of market, the Regulator shall ensure that the electric power supplier undertakes and performs its duties and responsibilities such that they are compatible with the principles provided in the approved market design. The state-owned distribution companies may be restructured or reformed so as to achieve the objectives set forth herein, or in any instrument or design developed / approved in pursuance of this National Electricity Policy.
- 5.3.5. In order to turnaround the performance of state-owned distribution companies, a strategic roadmap shall be developed by each of them, with the inputs and consultation of the Ministry of Energy (Power Division). The roadmap shall entail interventions for improvement of corporate governance, technical capabilities, safety, and commercial performance. The roadmap shall set out clear activities, and milestones to be achieved, with timely performance evaluations. The Ministry of Energy (Power Division) or its designated entity shall also be responsible for monitoring the performance of state-owned distribution companies in the context of the roadmap approved.
- 5.3.6. Different financing or investment options may be explored by the State-owned distribution companies for expansion of the distribution network, including financing / investment by Provincial Governments or DFIs, PPP models (only on BOT & BOOT basis) and Government to Government arrangements. All developments under the PPP model will be carried out on competitive basis, providing equal opportunity to all interested parties. All network expansion by distribution companies should be carried out in accordance with the distribution investment plans approved by the Regulator and, where applicable, shall be duly aligned with the IGCEP and TSEP.
- 5.3.7. State-owned distribution companies shall explore options, including use of technology and outsourcing of functions for improving administrative losses and collections.
- 5.3.8. The State-owned distribution companies shall make publicly available the forecasts, transmission and distribution plans and information regarding network constraints.

5.4. SYSTEM OPERATIONS

- 5.4.1. Effective and efficient performance of system operations is crucial for the power sector, as it enables safe, reliable, non-discriminatory and economic dispatch of

electric power from generation companies. Per key guiding principles, actions shall be taken to ensure the integrity of system operations.

- 5.4.2. Power allocation / distribution from the power pool to state-owned suppliers or any other entity shall continue in accordance with the existing power pool allocation mechanism, or as may subsequently be provided for in the National Electricity Plan.
- 5.4.3. The system operator may be restructured or reformed so as to achieve the objectives set forth herein or in the Plan, or in any instrument or design developed / approved in pursuance of this Policy.
- 5.4.4. The functions of system operator shall be carried out through IT-based automated systems. This will promote transparency in system operations, leading to safe, reliable and non-discriminatory economic dispatch.
- 5.4.5. SCADA and other associated systems which are necessary to integrate higher share of renewable energy sources in the generation mix will be upgraded.
- 5.4.6. Information related to short term forecasts, transmission congestions, loading and available capacity of transmission lines, dispatch based on unit commitment, market prices, reserves and all information that is necessary for implementation of competitive wholesale market shall be made public by the system operator.

5.5. MARKET DEVELOPMENT AND OPERATIONS

- 5.5.1. The efficient and liquid power market design, as approved by the Regulator (CTBCM), will contribute for attaining the policy goals. The approved wholesale market design ensures the following objectives:
 - a. providing open access to all market participants on a non-discriminatory basis;
 - b. creating an environment to attract investment;
 - c. contribute in improving power sector security of supply;
 - d. ensuring further evolution of wholesale market to advanced phases;
 - e. promoting competitive arrangements, both for and in the market;
 - f. promoting payment discipline among market participants;
 - g. eliminating sovereign guarantees for purchase of power over time through improvement in market conditions;
 - h. ensuring compatibility of wholesale market design for operation of retail market in the future;
 - i. ensuring transparency, predictability and accountability in the market; and
 - j. creating an environment for compatibility / participation in regional electricity market.
- 5.5.2. The approved wholesale market design, its implementation and subsequent development takes into account the following:
 - a. enabling the choice of changing supplier of electricity, initially only for large or Bulk Power Consumers, followed by gradual liberalization of the retail market;

- b. creating incentives to promote entry and sustainability of the most efficient generation in the system;
- c. no anomalies shall be created that allow any participant to take undue advantage of market conditions;
- d. creating minimum burden for the government in the form of subsidies through liberalization of the market;
- e. maintaining investor confidence by honoring the existing contracts (Energy / Power Purchase Agreements) and / or seamless transition of such contracts in the market design by mutual consent;
- f. providing a level playing field to all market participants through uniform application of cross-subsidization and other grid charges to consumers of all suppliers;
- g. the Government shall take a decision on the recovery of costs that arise due to advent of the open access and market liberalization;
- h. ensuring open access to information and undertaking other transparency measures in the market especially providing for credible and independent service providers in the market;
- i. standardizing trading instruments to enhance liquidity;
- j. commercialization of strategic projects;
- k. ensuring proper settlement mechanisms for the imbalances resulting from trade among different market participants;
- l. ensuring accountability of market participants to bring discipline in the market;
- m. building on experiences of international market development and local market conditions;
- n. allowing, through simple regulatory adjustments, the future evolution towards increasing competition for and/or in the market; and
- o. fair allocation of risks amongst market participants.

5.5.3. The market operator is responsible for the development/ evolution of the wholesale market, in consultation with the stakeholders, subject to approval by the Regulator.

5.5.4. In order to ensure implementation of wholesale market design and its further evolution, the Regulator shall in a timely manner frame, modify and evolve regulatory framework for, inter alia, supply, procurement, open access / wheeling, competitive bidding, import of power, and ensure effective market monitoring and enforcement. Provided that after implementation of CTBCM, every transmission licensee and distribution licensee shall offer, to all market participants, non-discriminatory open access / wheeling to its respective transmission or distribution system and interconnection services in accordance with CTBCM on the terms determined under the policy and legal framework.

5.5.5. The market operator may be restructured or reformed so as to achieve the objectives set forth herein, or in any instrument or design developed / approved in pursuance of this National Electricity Policy.

5.5.6. The Regulator shall also ensure that the market operator publishes all information that is necessary for operations of competitive wholesale market.

5.6. COST OF SERVICE, TARIFF AND SUBSIDIES

- 5.6.1. Financial sustainability of the sector is premised on the recovery of full cost of service, to the extent feasible, through an efficient tariff structure, which ensures sufficient liquidity in the sector.
- 5.6.2. The Regulator shall align adjustments in generation-end tariff with the consumer-end tariff, which shall be submitted by the licensees and determined by the Regulator in a timely manner, in respect of both quarterly and monthly adjustments.
- 5.6.3. In view of various parameters, including (a) the socio-economic objectives; (b) budgetary targets in field; and (c) recommendations of the Regulator with respect to consumer-end tariff for each state-owned distribution company, the Government may continue to propose uniform tariff across the consumers and regions. In pursuance thereto, the Regulator shall, in public consumer interest, determine a uniform tariff (inclusive of quarterly adjustments) for all the state-owned distribution companies. Additionally, Government may maintain a uniform consumer-end tariff for K-Electric and state-owned distribution companies (even after privatization) through incorporation of direct / indirect subsidies.
- 5.6.4. In due course, financial self-sustainability will eliminate the need for Government subsidies (except for any subsidies for lifeline, industry or agriculture consumers, as per prevailing Government considerations). The subsidies that are to be provided by the Government shall be released in a timely manner to contribute to the financial sustainability of the power sector.
- 5.6.5. The Regulator, in order to ensure liquidity of the power sector, provide a level playing field for the development of wholesale market and to facilitate prudent projects of the Government, may impose additional charge(s) which shall be deemed to be costs incurred by the distribution companies / electric power supplier(s). Such additional charge may take into account the sustainability, socio-economic objectives and commercial viability of the sector, affordability for the consumers and the policy of uniform tariff. Similarly, the Government may also incorporate, in the consumer-end tariff, any surcharge imposed by it, which shall also be deemed to be cost incurred by the distribution companies / electric power supplier(s) and shall be collected by them in discharge of their public service obligations.
- 5.6.6. Distributed generation is a growing and recognized phenomenon in electricity markets worldwide. The Regulator will devise facilitative guidelines for registration of distributed generation (i.e., consumers connected to the grid) with distribution companies. Such registration process shall enable incorporation of distributed generation in integrated planning and demand projections by the concerned entities. Further, the Regulator shall devise roadmap for the progressive elimination of licensing requirements for distributed generation.
- 5.6.7. The Regulator will provide for recovery of costs arising on account of distributed generation and open access in the consumer-end tariff, as decided by the Government. Further, the Government may announce, from time to time, various concessional packages to incentivize additional consumption to minimize such costs.

5.7. ENERGY EFFICIENCY AND CONSERVATION

- 5.7.1. Energy conservation and efficient use of energy are effective tools to manage the demand / supply of electricity and can lead to improved energy intensity index. The cost of one megawatt-hour saved through energy efficiency and conservation is much lower than the corresponding cost of generating one megawatt-hour. Accordingly, concerted efforts shall be made to promote efficiency and conservation measures, which shall serve as a first fuel for the above purpose.
- 5.7.2. All relevant power sector entities will ensure strict compliance and enforcement of the efficiency standards and conservation measures set out by National Energy Efficiency and Conservation Authority (NEECA). In order to facilitate discharge of functions by NEECA, the power sector entities shall assist, inter alia, in the following:
- a. implementation of strategic plan;
 - b. relevant quantitative or techno-economic analysis;
 - c. any relevant survey, surveillance, monitoring, inspection and / or energy audits;
 - d. electrical consumption statistics and / or assessments;
 - e. inputs required for the development of schemes, processes, standards, codes, product labels of equipment and appliances;
 - f. any input and / or feedback related to demand side management;
 - g. relevant inputs required to prepare or update national energy conservation policy and / or program(s); and
 - h. inputs required for identification of relevant opportunities and technology demonstrations, undertaking pilot projects, information and outreach, training and education, and conservation best practices.
- 5.7.3. In order to promote efficient use of available resources, the Regulator, in collaboration with NEECA, will promote incentive-based demand participation mechanism through regulatory framework.

5.8. INTEGRATED PLANNING

- 5.8.1. To meet the existing and future energy needs of the country, power sector planning will be integrated with the energy value chain. Accordingly, Ministry of Energy shall, henceforth, develop the future integrated energy plan on sustainable basis. In this regard, the corresponding transitional roadmap, structural adjustments and institutionalization shall be effectuated within one year from the notification of this National Electricity Policy. The developed integrated energy plan, and accordingly, the principles stated therein, including vis-à-vis fuel mix, shall be reflected in the frameworks established under this National Electricity Policy and in the investment & power acquisition programs of the licensees. This will enable achievement of the stated policy goals.
- 5.8.2. As an immediate step, the IGCEP¹ (the rolling generation capacity expansion plan for future ten years to be prepared under the grid code by the relevant entity and

¹ The IGCEP has not been approved by the Regulator at the time of approval of this policy. For the first iteration, IGCEP assumptions will be approved by the CCI.

approved by the Regulator every year) shall be approved by the Regulator, after public hearing and consultation with stakeholders, particularly Provincial Governments. NGC shall submit the TSEP (the rolling transmission system expansion plan which may be prepared for one, three, five or ten years into the future under the grid code by the NGC and approved by the Regulator) in support of the IGCEP to the Regulator for approval. The IGCEP and TSEP shall be followed and implemented by all stakeholders (including one-window facilitators set-up by the Federal and Provincial Governments), which shall be updated on an annual basis or as may be stipulated in the National Electricity Plan.

- 5.8.3. To ensure access to affordable supply of electricity, the criteria for the inclusion of transmission cost for candidate generation projects may be considered in the National Electricity Plan in consultation with the Provincial Governments. Such criteria shall be approved by the CCI.
- 5.8.4. Future procurement of electricity will be in accordance with the IGCEP and TSEP, pursuant to applicable policy / framework and regulatory stipulations.
- 5.8.5. Necessary provisions for export of power shall be incorporated in the integrated planning and framework(s) developed under this National Electricity Policy.
- 5.8.6. Generation & transmission expansion planning and system operations for the K-Electric shall be progressively integrated in the system to meet the policy goals. The roadmap shall be stipulated in the National Electricity Plan, or through a design or instrument developed / approved in pursuance of this National Electricity Policy.
- 5.8.7. The Government aims for progressive elimination of load shedding in all areas, including rural areas, for consumers who pay their electricity bills, in accordance with the legal framework of the country. Further, in order to promote electricity access to areas where grid expansion is financially unviable, off-grid and micro-grid solutions will be explored. Integrated planning shall provide for rural electrification and provision of electricity to unserved areas of the country.
- 5.8.8. The Regulator shall publish on its website the approved IGCEP, TSEP and distribution investment plans.

5.9. GOVERNANCE

- 5.9.1. Good governance is a pre-requisite for efficient and sustainable performance of any entity, and eventually contributes towards sustainability of the entire power sector. All sector entities and stakeholders shall adopt principles of transparency, fair play, and good governance in their decisions and operations.
- 5.9.2. The processes and decision-making time at the ministerial level, as well as related departments and sector entities, shall be optimized to contribute towards efficient operations. Additionally, all entities having their own corporate existence and being managed by their own board of directors shall act transparently in accordance with the approved strategic framework.

- 5.9.3. Board of directors of state-owned entities shall be appointed in accordance with the corporate governance rules. All appointments to the board of directors shall be on merit. Performance benchmarks shall be established for the entities, and performance of the boards will be reviewed against such benchmarks.
- 5.9.4. The Government shall explore various options of privatization to improve the efficiency of the state-owned entities, where applicable.
- 5.9.5. An independent assessment of regulatory past performance will be carried out under the Authority of CCI, no later than one year from the notification of this National Electricity Policy, and subsequently after every four years, with the aim of identifying actions and capacity-building measures to improve the Regulator's abilities to cope with the emerging challenges in the sector and minimizing regulatory lag, in line with integrated planning mechanisms for the sector. Principles and broad contours for such assessment shall be provided for in the National Electricity Plan.
- 5.9.6. Performance standards, codes and other regulatory frameworks will be updated so that they can realistically be followed.

6. POLICY IMPLEMENTATION

6.1. IMPLEMENTATION

- 6.1.1. The success of a policy is dependent on its effective implementation. To achieve the goals of this National Electricity Policy, it is necessary that appropriate plans, frameworks, guidelines and mechanisms are formulated, from time to time, to provide the operational tools for implementation.
- 6.1.2. This National Electricity Policy serves as the overarching umbrella for reform, development, improvement and sustainability of the power sector. In furtherance of the same, the Government will, with the mutual consultation of Provincial Governments, prepare a National Electricity Plan. The National Electricity Plan will be a five-year plan with fifteen years' perspective.
- 6.1.3. The National Electricity Plan shall provide guidelines, implementation mechanisms and tools for the realization of the policy goals for the power sector. It will entail high-level tasks, timelines and responsibilities of respective sector entities to meet policy directives. Pursuant to the National Electricity Plan, the Government may issue specific frameworks to facilitate implementation in a particular sub-sector. Any provision of the National Electricity Plan that is inconsistent with the National Electricity Policy shall be void.

6.2. MONITORING

- 6.2.1. Ministry of Energy (Power Division) shall be responsible, among other matters, for monitoring the implementation of the National Electricity Policy and National Electricity Plan.

- 6.2.2. All respective entities (federal/provincial) will provide a progress report on quarterly basis to the Ministry of Energy (Power Division) with respect to such aspects of the National Electricity Policy and National Electricity Plan that fall within their domain.
- 6.2.3. The Ministry of Energy (Power Division) will review and monitor the progress of implementation of the National Electricity Policy and National Electricity Plan. In the event such review indicates that there should be meaningful interaction of the power sector with other sectors, so that the National Electricity Policy is implemented in its true perspective, then the Ministry of Energy (Power Division) will collaborate with such other sectors / ministries for alignment of the power sector initiatives, and such ministries will facilitate fulfillment of the vision of the National Electricity Policy. Accordingly, Ministry of Energy (Power Division) will review progress on quarterly basis, and a detailed report on the progress and implementation status of the National Electricity Policy will be submitted on annual basis to CCI.
- 6.2.4. For the purposes of Section 6.2 and 5.3.5, the Ministry of Energy (Power Division) may designate any entity (or entities) to perform the tasks assigned under these sections.

6.3. APPLICABILITY, REVIEW AND UPDATING

- 6.3.1. The National Electricity Policy shall come into force immediately. Existing policies of the Government in the power sector, to the extent that they are not in conflict with the National Electricity Policy, shall continue to remain in field, till such time that revised policy frameworks are prescribed, or the existing policies are amended /modified by the Government. National Power Policy 2013 shall be repealed with the notification of this National Electricity Policy.
- 6.3.2. The Government, on its own motion or on the request of the Provincial Government, may review and propose revisions/amendments in the National Electricity Policy from time to time to CCI.



Ministry of Energy (Power Division)
A-Block, 2nd Floor, Pakistan Secretariat,
Islamabad, Pakistan