

## 能源發展綱領

# Guidelines on Energy Development

April 2017

### 壹、前言

全球正處在能源轉型的關鍵時代，綠色低碳能源發展將扮演著引領第三次工業革命的關鍵角色，能源不只是推動經濟成長的動力來源，綠色能源發展更是驅動經濟發展的新引擎。

衡量臺灣自有能源匱乏，98%依賴進口，化石能源依存度高，面對2015年立法通過「溫室氣體減量及管理法」與因應聯合國氣候變化綱要公約第21次締約方大會(COP21)通過之「巴黎協定」(Paris Agreement)等溫室氣體減量相關規範，我國必須順應這波能源轉型浪潮，掌握綠色成長的契機。惟能源安全涉及國家安全，轉型過程中需以確保國家能源供應穩定與安全為前提，規劃各類能源在各階段的合理結構，並加強資訊公開、公眾參與及政策風險溝通，以確保能源轉型過程順利與公平正義之落實。為此，我國能源政策的核心價值應兼顧「能源安全」、「綠色經濟」、「環境永續」與「社會公平」四大面向的共治理與均衡並進，以促進能源永續發展。

在全球歷經三次重大核災事件，及國內面臨核廢料處理議題下，我國重新檢視核能發電的定位，體認儘速達成非核家園的必要性，且於2002年所通過之「環境基本法」已明定政府應訂定計畫，逐步達成非核家園目

### I. Preface

In the key era of global energy transition, green and low carbon energy development would play a crucial role in leading the third industrial revolution. Energy is the source of momentum which stimulates economic growth, and the green energy development is even the new engine which drives economic development.

Consider the shortage of self-produced energy and the dependency on imported and fossil fuel energy as high as 98% in Taiwan, the “Greenhouse Gas Reduction and Management Act” promulgated in 2015 and Paris Agreement reached in UNFCCC COP21, Taiwan is bound to follow the trend of energy transition and seize this opportunity for green growth. However, the energy security is linked to national security, the rational mixes of all forms of energy at various stages must be planned during transition process under the premise of ensuring stability and security for national energy supply. Information openness, public participation, and communication on policy risks must all be strengthened in order to ensure smooth process of energy transition and implementation of fairness and justice. To this end, the core values of Taiwan’s national energy policies would be based on the common governance and balanced development in four major aspects which include “Energy Security”, “Green Economy”, “Environmental Sustainability” and “Social Equity” so as to foster the sustainable energy development.

As there have been three major nuclear disasters in the world and Taiwan is facing the issues of nuclear waste disposal, the position of nuclear power generation has been re-examined by the government, and the necessity of achieving nuclear-free homeland as soon as

標之政策方針，爰應積極增加資源投入，全面加速推動包含節能、創能、儲能及智慧系統整合之能源轉型，以逐步降低核能發電占比，期達成 2025 年非核家園目標。

本綱領定位為國家能源發展之上位綱要原則，除作為國家能源相關政策計畫、準則及行動方案訂定之政策方針，並據以落實推動能源開發及使用評估準則及研擬能源開發政策。

## 貳、法源依據

本綱領依「能源管理法」第 1 條第 2 項規定訂定。

## 參、發展目標

確保能源安全、綠色經濟、環境永續及社會公平之均衡發展，期達成 2025 年非核家園目標，實現能源永續發展。

### 一、能源安全

有效運用各類能源優勢，積極增加能源自主性與確保能源多元性，布建分散式能源，優化能源供給結構，推動能源先期管理及提升能源使用效率，以建構穩定、可負擔及低風險之能源供需體系。

### 二、綠色經濟

possible has been recognized. The “Basic Environment Act” promulgated in 2002 has shown that the government is bound to set a plan in order to reach the target of nuclear-free homeland. Therefore, the resources devoted should be increased, and the energy transition including energy saving, energy exploration, energy storage, and smart system integration has to be comprehensively accelerated so as to reduce the share of nuclear power generation and achieve the target of nuclear-free homeland by 2025.

The guidelines serve as the superior policy guidance for national energy development, energy policy programs, standards and action plans. The implementation of Regulations Governing the Assessment of Energy Development and Utilization, and formulation of energy development policies are also based on the guidelines.

## II. Source of Law

The guidelines are based on the Paragraph 2 of Article 1 in “Energy Administration Act”.

## III. Development Objectives

Ensure balanced development in energy security, green economy, environmental sustainability, and social equity so that the target of nuclear-free homeland can be achieved by 2025 and the sustainable development in energy can be attained.

### 1. Energy Security

Take advantages of all forms of energies, enhance energy autonomy and ensure energy diversity, establish distributed energy, optimize energy supply structure, promote preliminary assessment in energy planning and management so that the energy efficiency can be increased and a stable, affordable, and low-risk energy supply-demand system can be constructed.

### 2. Green Economy

強化節能、創能、儲能與智慧系統整合之全方位發展，結合區域資源特性與人才優勢，並強化國際連結，以綠能帶動科技創新研發與在地就業機會，創造綠色成長動能。

### 三、環境永續

降低能源系統溫室氣體排放密集度並改善空氣品質，落實能源設施布建應納入區域環境考量，完成既有核電廠除役並完善核能發電後端處置營運，以打造潔淨能源體系與健康生活環境。

### 四、社會公平

落實能源賦權精神，建構公平競爭的能源市場環境，並強化政策溝通與公眾參與，以確保世代內與跨世代公平，實現能源民主與正義。

## 肆、綱要方針

### 一、能源安全

#### (一) 需求面強化節能

- 1.採行「創新、就業、分配」之新經濟發展模式，以持續推動產業結構優化轉型。
- 2.落實大型投資生產計畫之能源使用先期管理，規劃採用商業化最佳可行技術，以提升能源使用效率。

Strengthen the comprehensive development of energy saving, energy exploration, energy storage, and smart systems integration, incorporate regional resources characteristics with talent advantages, and enhance international linkage in order to foster technological innovation with R&D and increase local job opportunities for the creation of momentum in green growth.

### 3. Environmental Sustainability

Reduce the intensity of greenhouse gas emissions from energy systems and improve air quality, take the regional environment into account during construction of energy facilities, and complete the decommission works of existing nuclear power plants and improve back-end disposal and management for nuclear power in order to create clean energy system and healthy living environment.

### 4. Social Equity

Fulfill the spirit of energy empowerment, construct an energy market environment with fair competition, and strengthen policy communication and public participation in order to ensure equity within and across generations and realize energy democracy and justice.

## IV. Guiding Principles

### 1. Energy Security

#### (1) Strengthen Energy Saving on the Demand Side

- Adopt the new economic development model of “Innovation, Employment, and Equitable Distribution” in order to continue with optimization and transition of industrial structure.
- Implement the preliminary management on energy use for large-scale investment on production plans, adopt best available commercialized technology in order to

3.擴大能源查核與導入能源管理系統，提高車輛與設備器具等能源效率標準，透過節能技術研發與示範應用，並提供適當誘因引導節能，以提升工業、運輸及住商各部門能源效率。

4.強化新建築節約能源設計規範，鼓勵既有建築進行節能改善，並提高建築節約能源標準。推動建築能源資訊透明與活化市場機制，以達成淨零耗能之建築、社區為目標。

5.透過政府帶頭、產業響應、全民參與，推動自願性節能措施，並規範浪費能源之行為與活動，以全面落實節能之生產、消費與生活模式。

6.整合節能、能源管理與儲能，強化電力需量反應、普及時間電價等負載管理措施，並導入創新商業模式，增加用戶參與機會，以抑低尖峰負載需求。

7.規範電業推動節能義務與配套機制。

## (二) 供給面多元自主低碳

1.建構效率化、自主化、多元化的能源組

enhance the energy efficiency.

- Expand the implementation of energy audit, deploy energy management system, raise the energy efficiency standards for vehicles and equipment, and enhance energy efficiencies of industrial, transportation, residential and commercial sectors via R&D and demonstration application in energy saving technologies while providing proper energy saving incentives.

- Strengthen energy saving design related regulations for new buildings, encourage energy saving improvement among existing buildings, raise building energy saving standards, improve the transparency of buildings' energy consumption information and promote its application in market to reach the target of net-zero energy buildings and communities.

- Promote voluntary energy saving measures via government's taking the lead, industrial response and public participation; regulate the energy consumption behaviors and activities to avoid waste in order to fully achieve energy-saving production, consumption, and living modes.

- Integrate energy saving, energy management, and energy storage, strengthen the demand response, disseminate the load management measures such as Time-of-Use Rates, and introduce innovative business models to increase the users' participation so that the peak-load demand can be curbed.

- Regulate the obligations of promoting energy saving and complementary mechanisms for power industry.

## (2) Diversification, Energy Autonomy, and Low Carbon on the Supply Side

- Establish efficient, autonomous, and

合，善用各類能源特性配置能源轉型各階段合理結構；強化能源安全預警及緊急應變機制，以確保能源供給穩定安全。

2. 掌握自產能源潛能，推動國際能源開發與技術合作，獎勵業者積極參與海內外能源開發，拓展各類能源供給管道，以增加自主能源比重。
3. 確保能源進口管道的穩定性，分散能源採購來源與方式，以降低進口能源供應風險。
4. 擴大再生能源設置，強化綠能發展誘因，建構再生能源友善發展環境，兼顧環境生態保護，鼓勵有助區域供需均衡之分散式電源設置，以促進再生能源加速發展。
5. 推動替代化石能源之技術發展與應用，以降低對化石能源的依賴。
6. 擴大天然氣使用，並布建天然氣接收站與輸儲設備及建立安全存量機制，以提高低碳能源供給與安全。

diversified energy mix and construct the reasonable structure for each stage of energy transition based on the characteristics of all forms of energy; strengthen energy security early warning and emergency response mechanism in order to ensure stability and security in energy supply.

- Grasp the potential of self-produced energy, promote international energy development and technological cooperation, encourage industries and business to be aggressively involved in domestic and overseas energy development, and explore various energy supply channels in order to increase the share of self-produced energy.
- Ensure the stability of energy import channels, and decentralize the sources and approaches in energy procurement in order to reduce the risks of imported energy supply.
- Expand the installation of renewable energy, strengthen the incentives for green energy development, establish the friendly environment for renewable energy development, take the environmental and ecological protection into account, and encourage the installation of distributed power which will contribute to the regional balance of supply and demand so as to accelerate the development of renewable energy.
- Promote the technological development and application of alternatives to fossil fuel energy in order to reduce dependency on fossil fuel energy.
- Expand the use of natural gas, construct natural gas receiving Terminals, transmission and storage facilities, establish safety stock mechanism in order to enhance the supply and security of low carbon energy.

- 7.視技術進展評估導入淨煤及減碳相關技術，提高燃煤發電效率，減少煤炭利用之碳排放。
- 8.提高發電廠效率，規範新電廠採用商業化最佳可行技術，並善用汽電共生系統配合調度供電之潛力，以穩定電力供應及確保供電品質。

### (三) 系統面整合智慧化

- 1.以合理需求訂定供給總量，以有限供給能力管理能源需求，在確保能源供應穩定安全原則下，落實分期分區供給容量之能源先期管理，促進區域能源供需均衡，並推動區域能資源整合，以提升整體能資源運用效能。
- 2.積極布建智慧電表與推動區域輸配電系統整體改善，利用資通訊、物聯網等技術促進系統整合應用，以提升服務能力與品質；加強綠電輸出預測與併網控制，以確保綠電優先併網。
- 3.配合儲能技術商業化時程，推動各類型儲能系統布建，以提升電網可靠度及穩

- Introduce clean coal and carbon reduction related technologies based on technological progress assessment, and enhance the efficiency of coal-fired power generation in order to reduce the carbon emissions from coal consumption.
- Improve the efficiency of power plants, regulate new power plants to adopt the commercialized best available technology, and make good use of the potential of co-generation system in terms of the compliance with power dispatching in order to stabilize power supply and to ensure power quality.

### (3) Smart System Integration

- Determine the total supply based on reasonable demand, manage energy demand based on limited supply capacity, implement the preliminary energy management in accordance with energy supply capacity by periods and by areas while ensuring stability and security of energy supply in order to achieve the balance of regional energy supply and demand and promote integration of regional energy and resources in order to enhance the overall utilization efficiency of energy and resources.
- Actively deploy smart meters and promote overall improvement of regional power transmission and distribution systems, foster system integration application via Information and Communication Technology (ICT) and Internet of Things (IoT) in order to enhance the capability and quality of service; strengthen green power output forecast and on-grid control in order to ensure the priority access to the grid for green power.
- Promote the deployment of all types of energy storage systems matching the schedule of commercialization in energy

定性。

- 4.在確保電力穩定供應下，調整電力調度模式，將環保納入考量。
- 5.健全能源之生產、運輸及儲存等相關設施之安全管理，並落實查核制度，以維護公共安全。

## 二、綠色經濟

### (一) 打造綠能產業生態系

- 1.完善綠能產業發展所需之法規獎勵、土地取得、融資機制、周邊服務與基礎建設等，以營造優質產業發展環境。
- 2.以國內綠能需求扶植產業，擇定重點產業，整合運用既有產業優勢，推動跨業整合，從零件走向系統，建立新綠能產業鏈，形成具全球競爭力的綠色能源產業生態系，以拓展全球綠能商機。
- 3.培育綠能產業高素質人力，活絡國內外綠能人才流通管道，以厚植國內綠能產業發展能量。
- 4.透過總量管制與排放交易制度等政策工具或市場機制，建構環境成本定價機制，創造新的綠色服務經濟，以促進綠色生產及綠能投資。

storage technologies in order to improve the reliability and stability of power grid.

- Adjust power dispatching model under the premise of stabilizing power supply while taking environmental protection into account.
- Conduct sound safety management for energy production, transmission and storage facilities, and conduct safety inspections in order to maintain public safety.

## 2. Green Economy

### (1) Construct Green Energy Industrial Ecological System

- Construct sound regulatory incentives, land acquisition, financing mechanism, peripheral services, and infrastructure required for the development in green energy industry in order to create a high quality environment for industry development.
- Support industries via domestic green energy demand, select key industries, integrate and utilize existing industrial advantages to promote cross-industry integration, establish new green energy industry chain from parts to system, and form green energy industrial ecological system with global competitiveness in order to explore global green energy business opportunities.
- Cultivate quality manpower for green energy industries, and vitalize domestic and global network for green energy human resources so as to strengthen development of domestic green energy industry.
- Establish environmental costs pricing mechanism through policy tools or market mechanisms such as cap and trade, and create new green service economy in order to foster green production and green energy investment.

## (二) 普及綠能在地應用

- 1.運用區域資源特性，結合產業及學研機構，發展地方型綠能應用計畫與示範場域，以帶動地域綠能產業發展及創造在地就業。
- 2.結合在地特色，培植產業在地化，以提升地方參與綠能應用發展意願。
- 3.結合智慧城市與農村發展，接軌物聯網發展契機，以培植產業在地化綠能服務及整體輸出拓銷能力。

## (三) 創新綠能減碳科技

- 1.結合企業、法人及學校，以目標導向精進能源科技研發能量，同時加強前瞻能源關鍵技術與全球專利布局，配合發展進程導入前瞻能源示範，並透過技術移轉或資源共享，以促進產業創新與競爭力。
- 2.強化儲能與智慧電網技術研發與布建，加速發展雲端智慧化能源管理系統，由市場需求引導研發能量發展，以建構商業模式及核心能力。
- 3.強化國際連結，積極與全球技術領先國家合作接軌，以提升綠色創新能量。

## (2) Promote Regional Green Energy Application

- Apply characteristics of regional resources, develop local green energy application plan and demonstration sites by integrating industry and academic institutes in order to drive the development of local green energy industry and create local job opportunities.
- Cultivate local industry in conjunction with local features in order to enhance the willingness among local businesses to participate in green energy application development.
- Integrate the development of smart city and agricultural villages in conjunction with opportunities of IoT development in order to cultivate localized industrial green services and overall export sales capability.

## (3) Innovate in Green Energy and Carbon Reduction Technologies

- Unite enterprises, corporations, and schools to orient toward advanced energy technologies R&D capacity while strengthening key advanced energy technologies and global patent layout, introduce demonstration of advanced energy in coordination with development progress, and foster industrial innovation and competitiveness via technologies transfer or resources sharing.
- Strengthen the technologies R&D and deployment of energy storage and smart grid, accelerate the development of cloud intelligent energy management system, and guide the development of R&D capacity by market demand in order to establish business models and core competence.
- Strengthen international connection, and aggressively cooperate with countries

### 三、環境永續

#### (一) 維護空氣品質

1. 電廠興建規劃時，將空氣污染物排放總量管制列為規劃基礎，並依區域與跨域污染物負荷程度，考量污染防制設備提升，以促進環境永續與空氣品質改善，降低民眾健康風險。
2. 確保能源穩定供應之前提下，強化及考量地方空氣污染治理權責，以促進區域與跨域空氣品質提升及確保公共健康。

#### (二) 規劃適當區位

能源設施布建時應考量區位資源條件與環境保護，以避免或降低對環境敏感地區之衝擊。

#### (三) 溫室氣體減量

1. 參考氣候變遷相關國際公約決議事項及國際氣候談判情勢，並在維護我國產業競爭力及考量成本效益等原則下，訂定能源部門溫室氣體階段管制目標，以兼顧經濟發展與環境永續。
2. 掌握能源產業溫室氣體排放量及評估減量潛力，推動能源結構低碳化，以逐

which are equipped with global leading technologies in order to enhance green innovative capacity.

### 3. Environmental Sustainability

#### (1) Maintain Air Quality

- Take the cap of total emissions from air pollutant as the basis for the planning of new power plants, and consider the improvement of air pollution control equipment according to pollutant load in each region and across all regions so as to promote environmental sustainability, improve air quality, and reduce the health risks for the public.
- Strengthen and consider the responsibilities of local air pollution governance on the premise of ensuring stable energy supply in order to improve regional and cross-regions air quality and ensure public health.

#### (2) Select Appropriate Site

The resource endowments and environmental protection should be taken into account during the construction of energy facility in order to avoid or reduce the impacts on environmentally sensitive areas.

#### (3) Greenhouse Gas Emissions Reduction

- Determine the periodic regulatory goal of greenhouse gas emissions for energy sector in accordance with international convention resolutions related to climate change and situations of international climate negotiations under the principles of maintaining the domestic industrial competitiveness and taking the cost benefit into account in order to balance economic development and environmental sustainability.
- Control the greenhouse gas emissions by energy industries, assess the potential for emissions reduction, and promote low

步降低單位燃料使用之溫室氣體排放。

- 3.強化能源用戶減量誘因，依不同類型能源用戶規劃階段性減碳之獎勵、抵換或管制等彈性機制，以鼓勵全面持續性的減量行動。

#### (四) 達成非核家園

- 1.在確保公眾知情權、在地社區參與、採用國際最佳可行措施等三大原則下，推動既有核電廠除役。
- 2.比照國際核能標準，加強核電廠安全監管，並強化核子事故與複合式災害整備與應變能力。
- 3.基於公開透明原則妥善規劃短中長期高、低階放射性廢棄物管理與處置政策，以及最終處置相關法規之修正與研擬。
- 4.適時檢討核能發電後端營運基金徵收額度與運用辦法，同時建立專責機構負責推動與執行，以確保核廢料處理之落實。

#### (五) 建構低碳環境

- 1.建構低碳生活環境及低碳循環型社會，推動社區低碳改造計畫及全民節能減碳生活運動，以加速低碳社會轉型。

carbon energy structure in order to gradually reduce the greenhouse gas emissions per unit of fuel consumption.

- Incentivize energy users in reducing emissions, encourage comprehensive and continual emissions reduction actions by planning for flexible carbon reduction mechanisms such as rewards, offset, or regulations for different types of energy users by stages.

#### (4) Reaching Target of Nuclear-Free Homeland

- Promote the decommissioning of existing nuclear power plants under the three major principles which include assuring public's right to know, participation of local communities, and adoption of internationally best practices.
- Strengthen security supervision of nuclear power plants in accordance with international nuclear energy standards while improving the preparation and emergency response for nuclear accidents and composite disasters.
- Properly plan for the short-term, mid-term, and long-term management and disposal policies for high level and low level radioactive wastes based on the principle of openness and transparency, and amend and formulate laws and regulations related to final disposal.
- Review the tariff and utilization for Nuclear Backend Fund while establishing dedicated institution to be responsible for the nuclear waste disposal.

#### (5) Establish a Low Carbon Environment

- Establish a low carbon living environment and circular society, promote low carbon community renovation plan and national energy saving carbon reduction movement in order to accelerate the transition to a low

2.加速綠色運輸路網建置、智慧運輸系統導入，及低碳節能運具之推廣使用，以建構人本、安全、高效率之綠能低碳交通環境。

3.整合地方政府，利用在地資源，打造低碳城鄉，營造節能減碳居住環境及改變都市紋理減少熱島效應，以擴大低碳施政廣度。

#### 四、社會公平

##### (一) 促進能源民主與正義

1.建立能源領域公眾參與、風險溝通機制及誘因，以引導民間共同參與能源轉型。

2.推動參與式能源治理，能源政策研擬與實踐應秉持多元參與，落實資訊公開透明以促進程序正義。

3.政府施政應促進世代內與跨世代公平，確保弱勢族群獲得基本能源服務，兼顧能源使用之公平正義，以避免能源貧窮，促進能源永續發展。

##### (二) 能源市場革新

1.在電力穩定供應前提下，以「多元供給、公平使用、自由選擇」為目標，分階段

carbon society.

- Accelerate the construction of green transportation network, the introduction of smart transportation system, and the promotion of low carbon energy saving vehicles in order to establish a human-oriented, safe, and highly efficient green energy low carbon transportation environment.

- Integrate local government, utilize local resources to create low carbon cities/villages, construct an energy saving carbon reduction living environment, change the urban texture and reduce heat island effect in order to broaden the horizon of low carbon governance.

#### 4. Social Equity

##### (1) Promote Energy Democracy and Justice

- Establish mechanisms and incentives for public participation and risks communication in order to guide the private sectors to jointly participate energy transition.

- Introduce the participatory governance approach to energy policy making, formulate and implement energy policies based on diversified participation, implement information openness and transparency so as to facilitate procedural justice.

- Government administration should contribute to equity within and across generations while assuring the basic energy services for vulnerable groups and the equity and justice in energy use in order to avoid energy poverty and facilitate sustainable energy development.

##### (2) Energy Market Reform

- Promote the domestic power industry reform by phases under the premise of stable power supply with the goal of

推動我國電業改革，促進電業公平競爭及合理經營，並調整國營事業之績效指標符合能源轉型方向，以保障用戶權益，增進社會福祉。

2. 推動能源價格合理化，建立透明公開之能源價格調整機制，並藉由導入綠色稅制或其他政策工具，以有效反映能源內部及外部成本，符合使用者付費原則。

## 伍、政策配套

- 一、完善能源轉型法制：提供各部門能源轉型所需市場結構與法制基礎；推動綠色金融發展，以營造推升綠能經濟之金融環境。
- 二、全面低碳施政：中央與地方施政計畫、基礎建設、區域規劃、產業發展規劃應納入節能減碳思維；依區域特性，由中央與地方共同推動區域能源治理，以深化低碳施政。
- 三、多元配套機制：運用多元之獎勵、輔導、管制、融資或其他必要之配套措施，以加速政策落實。

“Diversified Supply, Equity in Usage, and Freedom of Choice”, facilitate fair, competitive and reasonable operation of power industry, and adjust the performance indicators of state-owned business following the direction of energy transition in order to protect the users’ rights and interests while increasing social well-being.

- Promote rationalization in energy prices, establish an energy price adjusting mechanism with transparency and openness, and reflect the internal and external energy costs effectively by introducing green tax or other policy tools so as to comply with the user-pay principle.

## V. Complementary Policies

### 1. Complete Legislation and Regulation for Energy Transition

Provide all sectors the market structure and regulatory basis required for energy transition; promote the development of green finance in order to create the financial environment for improving green energy economy.

### 2. Comprehensive Low Carbon Administration

The energy saving and carbon reduction concepts should be incorporated in the administration plans, infrastructures, regional planning plans, and industrial development plans of central and local governments; the regional energy governance should be promoted by central and local governments based on the characteristics for each locality in order to deepen the low carbon administration.

### 3. Diversified Complementary Mechanisms

Utilize diversified complementary mechanisms such as rewards, consultation, control, financing, or other necessary complementary measures in order to

**四、氣候變遷調適：**因應氣候變遷，評估能源供給體系及設施之潛在風險，並規劃調適策略與行動，以強化氣候調適韌性。

**五、深化能源風險溝通與教育：**培育能源之科技與社會人才，推動雙向、多元之能源風險溝通與認知，強化社會創新之溝通研發與實踐，並加強全民能源教育宣導，提升國民能源轉型認知，建立以節能減碳為核心之生活文化。

#### **陸、推動機制**

訂定能源轉型白皮書，規劃未來能源發展目標、具體推動措施及政策工具，每年提出執行報告，每5年定期檢討。

accelerate the policy implementation.

#### **4. Climate Change Adaption**

Assess the potential risks of energy supply systems and facilities in responding to climate change while planning for adaptation strategies and actions in order to strengthen the climate adaptation resilience.

#### **5. Deepen Communication and Education on Energy Risks**

Cultivate energy talents from technology and social science backgrounds, promote bilateral and diversified communication and awareness in energy risks, strengthen the communication, R&D, and implementation of social innovation, enhance national energy education propaganda, and improve the national awareness of energy transition in order to establish the living and culture which take energy saving and carbon reduction as the cores.

#### **VI. Promotion Mechanisms**

Formulate White Paper for energy transition, plan for the objectives, concrete measures, and policy tools for future energy development, submit annual accomplishment report to summarize the achievements, and conduct periodic review for every five years.