

**APEC Energy Resiliency Enhancement Project Workshop**  
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# Introduction to APEC Energy Resiliency Principles/Energy Resiliency Guidelines

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# APEC Energy Resiliency Principle

- The APEC region has been continuously challenged with natural disasters, ranging from earthquakes, tsunamis, and hurricanes to heavy snows, posing massive risks and threats to human lives and economic security. Cyberattacks, terrorism, and other manmade disasters also pose risks and threats to global energy supply chains.
- The APEC EWG/ERTF was shared and discussed by member economies to strengthen energy resiliency within the APEC region, and the APEC Energy Resiliency Principle published in August 2020.



# APEC Energy Resiliency Principle

## Expectations;

- The Principle recognizes the diversity of the APEC member economies' energy infrastructure and respects all initiatives in cooperation with relevant stakeholders.
- The APEC economy are expected to select and implement initiatives to strengthen energy resiliency according to its own circumstances based on the Principle.
- The principle identified relevant stakeholders and their roles to enhance energy resilience including government, energy supplier, consumer, and financial institutions.



# APEC Energy Resiliency Principle

## APEC Energy Resiliency Principle

### I. Background and Purpose of the principle

Description of the background and purpose of the development

### II. Definition of energy resiliency

### III. Respect for diversity among economies, holistic approaches and multi-stakeholder processes

Description of the "diversity principle" relating the contents of the Principle

### IV. Relevant stakeholders and their roles to enhance energy resiliency

- Governments
- Energy supply industries
- Industrial and general energy consumers
- Financial institutions

Identification relevant stakeholders and description of their roles taking into action for enhancement of energy resiliency

### V. Common approaches among different stakeholders towards energy resiliency

- Energy resiliency plans
- Investment and financing to projects towards energy resiliency
- Proper asset management
- Emerging technologies adoption
- Multi-stakeholder knowledge sharing

Description of major common approaches for enhancement of energy resiliency

### VI. Follow-up actions based on the principle in EWG/ERTF



# APEC Energy Resiliency Principle

## Relevant stakeholders and their roles:

### Government

*“Governments should implement initiatives including enacting, amending and abolishing energy-related regulations to support private actors in enhancing energy resiliency.”*

*“Governments should besides establish standards and guidance so that energy supply industries and industrial energy consumers can formulate energy resiliency plans that may contain disaster prevention and reduction, restoration, building back better and information sharing.”*

- The governments (including local governments), which provides specific support measures for private actors to strengthen energy resiliency. The Governments's key role is to develop standards and guidance for private actors to develop energy resiliency plans.



# APEC Energy Resiliency Principle

## Relevant stakeholders and their roles:

### Energy supply industries

- Energy supply industries, including petroleum products, electricity and gas, should be developed and implemented their plans to strengthen energy resiliency. Among them, it is important to secure energy supply in the event of a disaster by improving the energy self-sufficiency rate and strengthening the grid system accompanying the introduction of renewable energy.
- In addition, energy management systems utilizing various technologies should be prepared to respond in the event of a disaster.



# APEC Energy Resiliency Principle

## Relevant stakeholders and their roles:

### Industrial and general energy consumers

*“Industrial and general energy consumers should implement initiatives including formulating and implementing energy resiliency plans, securing and storing additional energy reserves, and deploying distributed energy resource (DER) systems and technologies including in-house power generation, cogeneration, and micro-grid systems..”*

- This principle identifies energy customers as key stakeholders in strengthening energy resiliency and recommends that these energy customers formulate plans to strengthen their own energy resiliency and introduce appropriate equipment and technologies as well as in addition to the energy supply sector.



# APEC Energy Resiliency Principle

## Relevant stakeholders and their roles:

### Financial Institutions

*“Financial institutions should implement initiatives including positively evaluating investing and financing both public and private projects that contribute to enhancement of energy resiliency of member economies.”*

- Financial institutions are positioned as important stakeholders in the enhancement of energy resiliency in the APEC economies. Assessment of, investment in, and financial support for financial institutions' efforts to strengthen energy resiliency are recommended.





# APEC Energy Resiliency Guideline

- The APEC Energy Resiliency Principle was endorsed at the EWG59 meeting held in August 2020, compiled norms and measures that **stakeholders in each economy should voluntarily pay attention to and implement in order to improve energy resiliency.**
- One of the action items identified in the Principle was to **develop guidelines to support formulation of energy resiliency enhancement plans in APEC member economies.** In order to ensure the guidelines reflect the regional diversity and variety of energy resiliency challenges in the APEC region, the guideline was published through three WSs were held (Feb. 2023).



# APEC Energy Resiliency Guideline

## Contents of the guideline

- The guidelines were developed **based on best practices** and recommendations gathered from participants from each WS as well as literature research on relevant energy resiliency efforts in the APEC region.
- **Initiatives from multiple economies are listed as reference examples for the contents of the guidelines.**
- The APEC Energy Resiliency Guidelines focus on key stakeholders and approaches that **were identified in the APEC Energy Resiliency Principle**. It is structured in accordance with relevant stakeholders and common approaches among different stakeholders.



# APEC Energy Resiliency Enhancement Project (EWG 09 2021A)

- **APEC continues to implement actions to strengthen the energy resiliency of APEC economies, starting with the publishment of the principles.**

## **Objectives of the existing project;**

- Based on the follow-up actions stipulated in the Principles, this project aims to enhance the ability to secure stable energy supply by effectively dealing with disasters through the three activities;



# APEC Energy Resiliency Enhancement Project (EWG 09 2021A)

## 【Key Activities】

1. Developing an **APEC Energy Resiliency Sectoral Guideline for Energy Infrastructure Companies**
2. Holding a workshop for capacity building on energy resiliency through dissemination of the Principle.
3. Conducting research work including identifying, collecting, and assessing indicators to evaluate energy resiliency in APEC economies,

**The project team will continue to implement the project while keeping in mind the challenges and best practices of each economy learned through this WS and communicating with WS participants.**





## Activity relative to APEC Energy Resiliency Principle

# APEC Energy Resiliency Principle

**Promote more relevant activities within APEC and globally;**

- Promote the development of related guidelines and guidance including sector specific contents .
- Development of International standards (e.g., ISO) relating energy resilience enhancement





# ISO 22366; Security and resilience – Energy resilience – Framework and principles

- International standard development approval: September 2022 under ISO/TC292 (Security and Resilience)
- Proposer/secretariate: JISC/Japan
- Registered experts: 16 economies
- Development status: CD (committee draft)
  - Create WD referred on the APEC's principle and develop content as ISO
- Target publication date: 11 Oct 2025



# ISO 22366; Security and resilience – Energy resilience – Framework and principles

## User's benefits:

- **Central/local governments** should support private stakeholders and communities in enhancing energy resilience and formulation of energy resilience plans that may contain disaster prevention
- **Energy consumers** should implement initiatives including formulating and implementing energy resilience plans
- **Residential sector** can also obtain various benefits from implementation of energy resilience enhancement







## ISO 22366; Security and resilience – Energy resilience – Framework and principles

- **Financial institutions** should implement initiatives including positively evaluating, investing and financing both public and private projects that contribute to enhancement of energy resilience.
- **Energy supply Chain Networks:** All stakeholders and contributors to an energy supply chain network should use a common set of resilience principles and standardised decision framework for enhancing energy resilience for the benefit of society



Thank you very much for your attention.

## Reference;

- APEC Energy Resiliency Principle  
[http://mddb.apec.org/Documents/2020/EWG/EWG59/20\\_ewg59\\_023.pdf](http://mddb.apec.org/Documents/2020/EWG/EWG59/20_ewg59_023.pdf)
- APEC Energy Resiliency Guideline  
<https://www.apec.org/publications/2023/02/apec-energy-resiliency-guidelines#:~:text=In%20line%20with%20the%20APEC,snows%2C%20cyberattacks%2C%20terrorism%2C%20piracy>
- Workshop on Energy Resiliency Principle: Project Summary Report  
<https://www.apec.org/publications/2023/02/workshop-on-energy-resiliency-principle-project-summary-report>
- ISO 22366  
<https://www.iso.org/standard/83384.html?browse=tc>