

Introduction of Energy Safety Management System of Korea



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※ ESMS : Energy Safety Management System

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I

Introduction

I . Introduction of ESMS in Korea

To Prevent the possible hazards caused by electricity & gas



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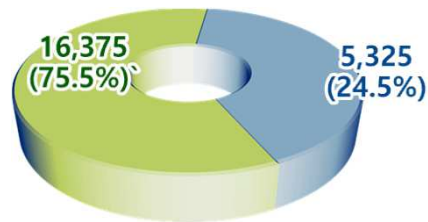
I Present Status

II. Present Status in Korea

A. Gas Consumption and Target of Gas Safety Management

Households using Gas

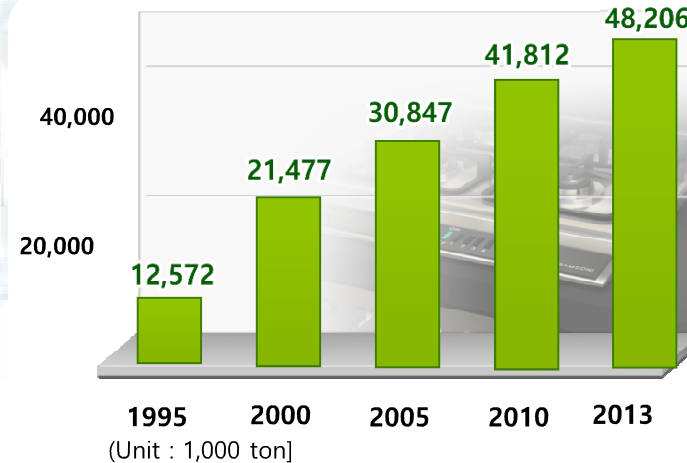
Number of Households : 21,700



(Unit : 1,000 Household)

■ Natural Gas
 ■ LPG

Gas Consumption



(Unit : 1,000 ton)

Target of Gas Safety Management

Target on Gas Safety Management : 274,900 Unit

Natural Gas Facility

96,283 Unit (35.0%)
 (Pipe-Line: 252,000km)

LPG Facility

178,187 Unit (60.2%)

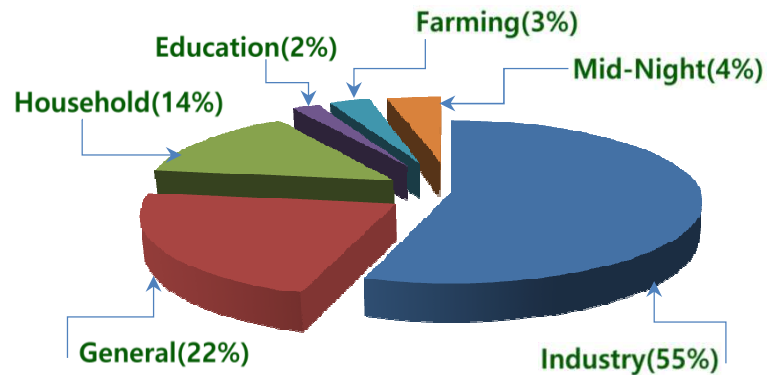
High Pressure Gas Facility

13,233 Unit (4.8%)

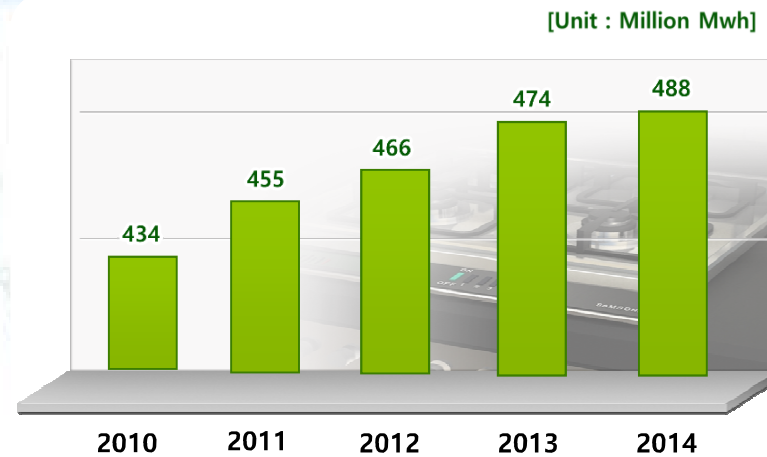
II. Present Status in Korea

B. Electricity Consumption and Target of Safety Management

Electricity Consumption



Electric Power Consumption

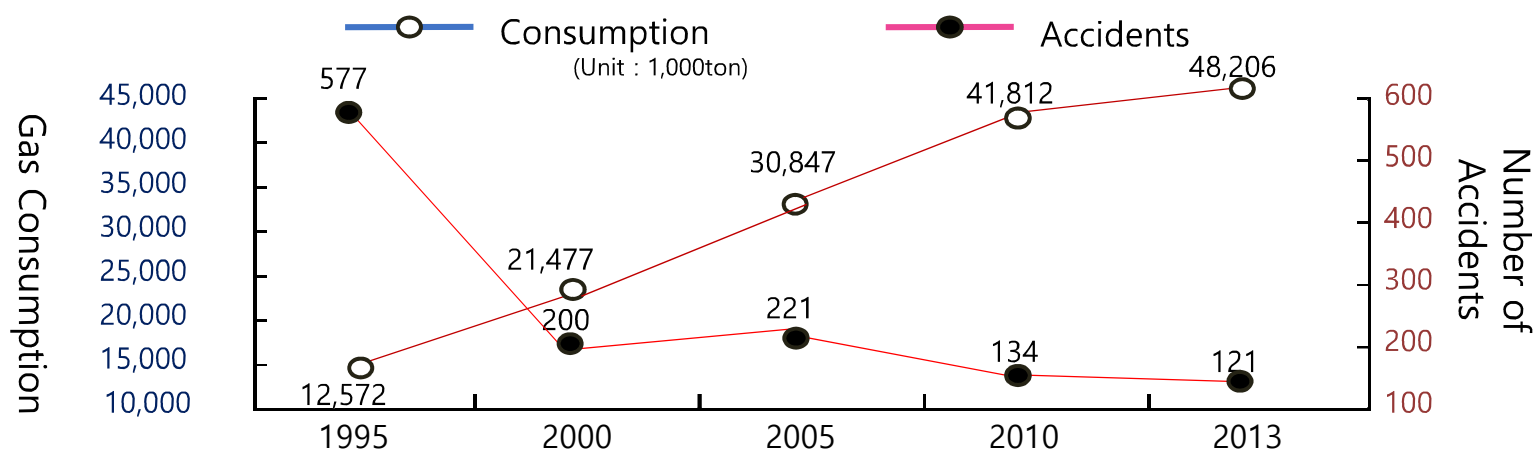


Target of Electrical Safety Management

Business Use	Private Use	General Use
Power Plant, Substation, Transmission Line	Exceed 600V or Over 75kW with under 600V	Below 600V & 75kW

II. Present Status in Korea

C. Statistics on Gas Accidents in Korea

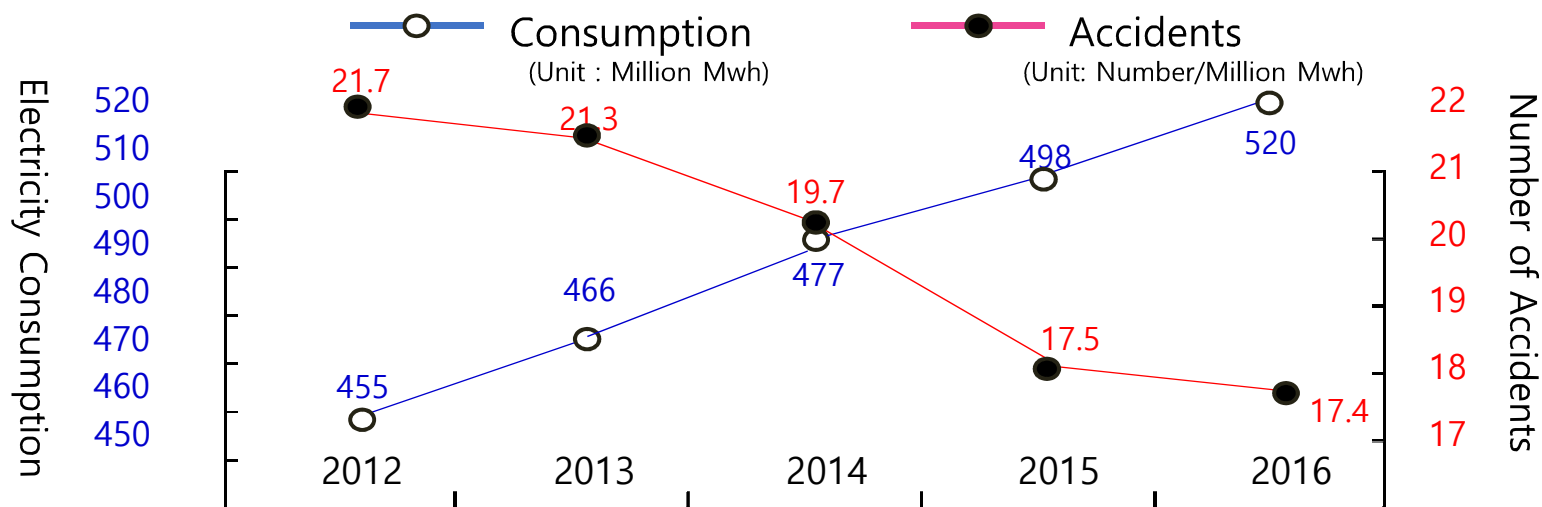


Reduction of Gas Accidents : 79%
Year 1995 : 577 → **Year 2013 : 121**
Expansion of KGS Organization
Supply of Gas Inspection Appliance
Public Relation on Gas Safety

Achieve the World Top Level
Gas Safety Management Performance
Damage for Humans
Per 1,000,000 Households using Gas
Korea : 6.8
UK : 13.7 Italy : 21.2

II. Present Status in Korea

D. Statistics on Electricity Accidents in Korea



**Reduction of Electrical
Fire Accidents : 22%**

Year 2010 → **Year 2014**
21.8 → **17**

Securing & Cultivating Safety Experts
Conducting Safety Check-Up
Extension Public Relation
Accident Investigation

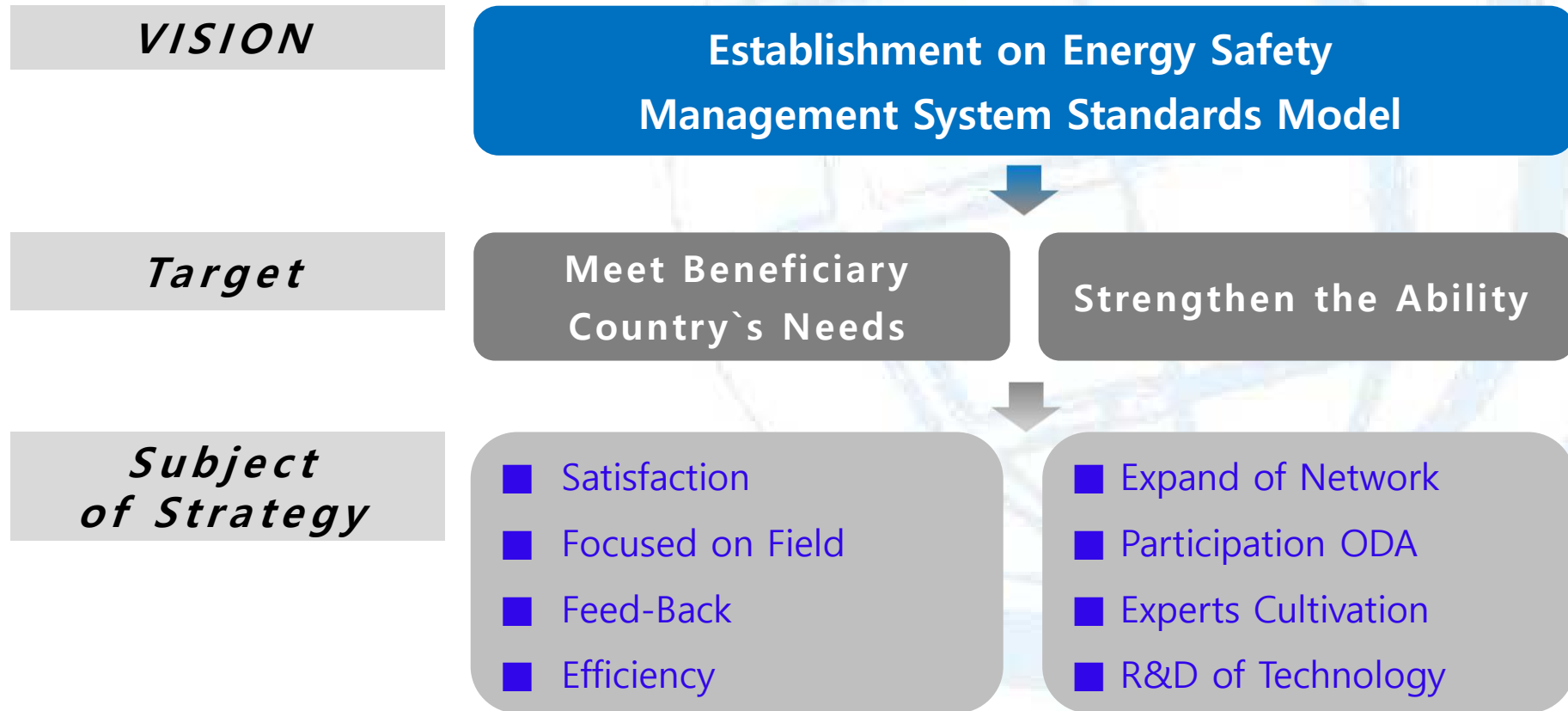
A blue square containing the Roman numeral "III" in white, followed by the word "Strategy" in a bold, black, sans-serif font. A horizontal blue line is positioned below the text.

III Strategy

III. Strategy

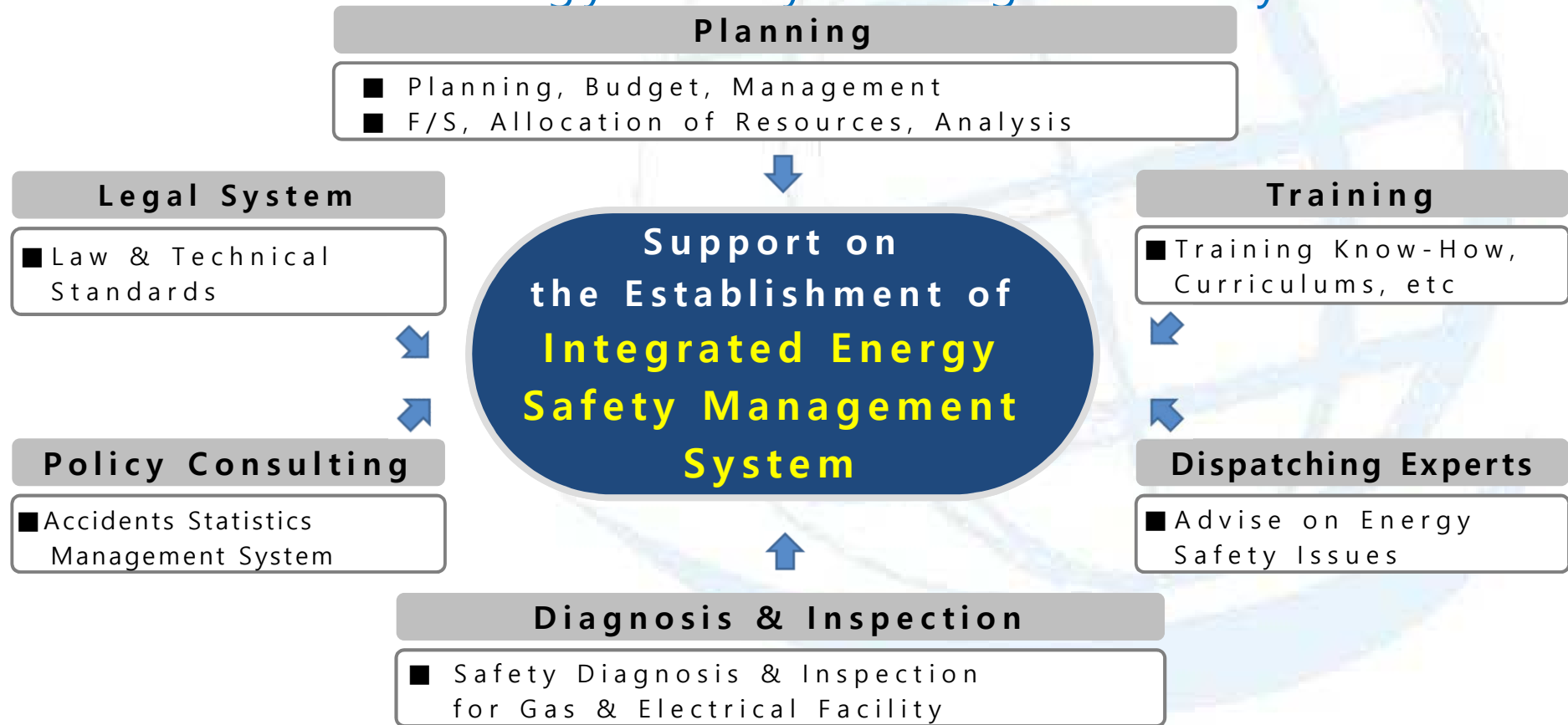
Enforcement of Korea **National Brand**

Establishment of **Global Energy Safety Management Model**



III. Strategy

Sharing Developing Experience of Korea Energy Safety Management System



III. Strategy

Enhancement on Efficiency & Performance

Experience

Specialty

Performance

Participation

Integrated

- Establishment of Legal System
- Cultivation of Manpower
- Pilot Safety Diagnosis

- **With Beneficiary Country**
 - Korea : KGS + KESCO
 - Beneficiary Country

- Support of the Energy Safety Management **Policy**
- Support of the Energy Safety Management **Technology**

- ✓ Expanding the Support of Energy Safety Management System Model
 - ✓ Decreasing the Number of Gas & Electrical Accidents
- ✓ Developing the Gas & Electricity Industry in the Beneficiary Country

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IV

Performance

IV. Performance

Improvement of the Level on Energy Safety Contribution to Gas & Electricity Industry Development

Operation of Sustainable & Independent Energy Safety Management System

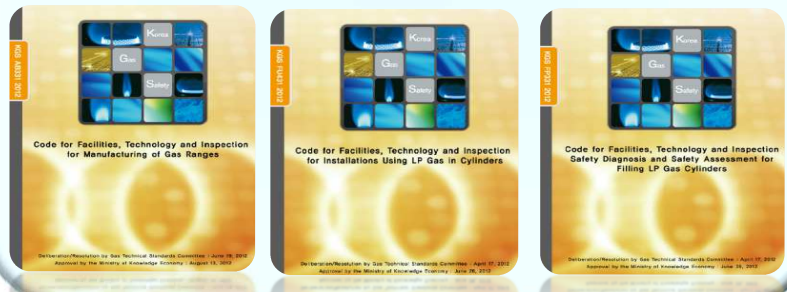
MOU on cooperation of Energy Safety Management

- Vietnam ISEA(Gas Safety)
- Indonesia MIGAS(Gas Safety)
- Mongolia MEM(Gas & Electrical Safety)
- Philippine MEM(Electrical Safety)



Providing Technical Standards

- Vietnam : 15 LPG Technical Standards
 - Indonesia : 9 CNG Technical Standards
 - Mongolia : 4 Natural Gas(City Gas)
- Technical Standards



IV. Performance

Training

- Vietnam : Training in Korea (Gas)
- Vietnam : Diagnosis Field Training
- Vietnam : Training in Korea (Electrical)



Safety Diagnosis

- Vietnam : LPG Terminal QRA
- Indonesia : LPG Terminal QRA
- Mongolia : Power Plants Diagnosis



Social Responsibility

- Mongolia : Visit to Orphanage
- Philippine : Visit to Orphanage
- Indonesia : Visit to Orphanage



Evaluation & Feed-Back

- Mongolia : Appreciation Plaque
- Philippine : Appreciation Plaque
- Indonesia : Appreciation Plaque



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V Suggestion

V. Suggestion

Support on **Improvement of Energy** **(Gas & Electrical) Safety Management System**

Contents

Policy Consulting

- Establishment of Energy Safety Legal System
- Specialized Energy Safety Management Knowhow
- Dispatching Technical Experts

Cultivation

- Energy Safety Management Training
- Safety Diagnosis for Gas & Electrical Facility

Facility

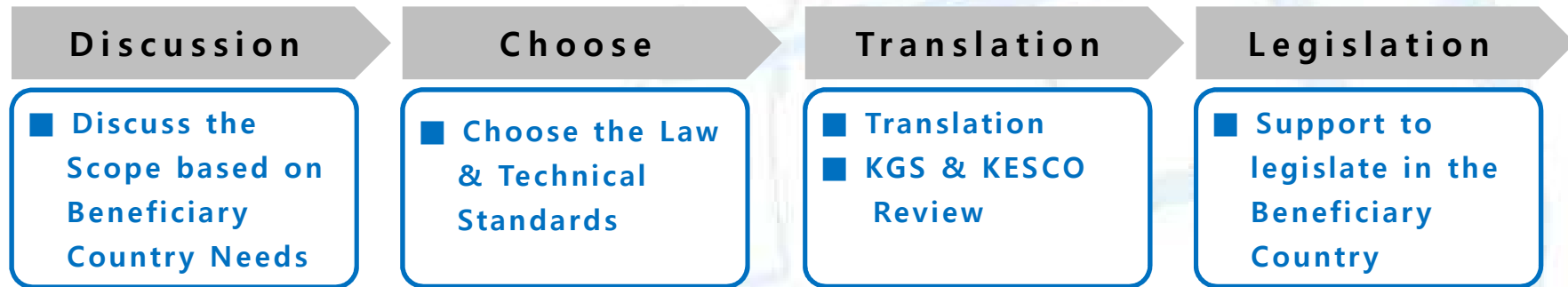
- Support on the Energy Safety Facility
- Support on the Energy Infra Facility

- ✓ **Level-Up** of Energy Safety Management
- ✓ **Development** of Energy Industry & **Expansion** of Energy Infra

V. Suggestion

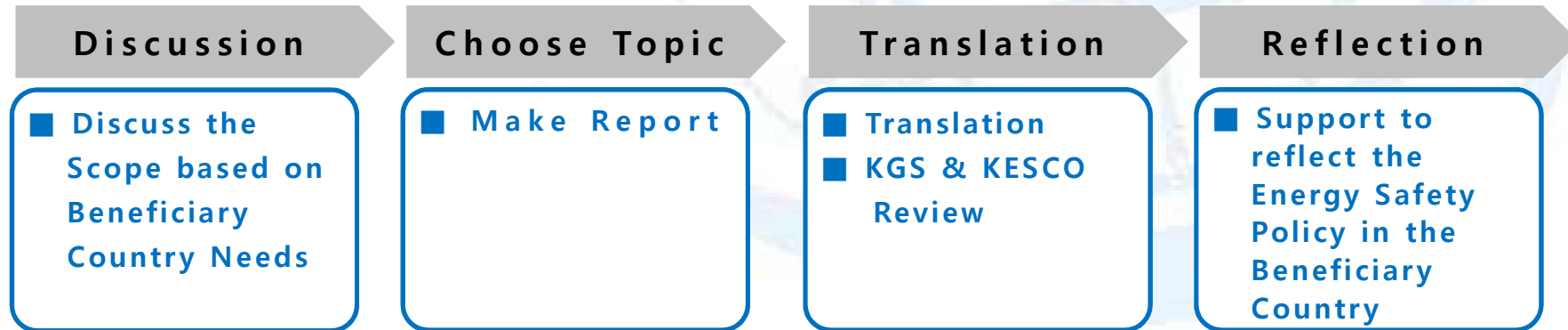
A. Improvement of Energy Safety Legal System

Providing Energy Safety Law based on Beneficiary Country Needs



B. Policy Consulting on Energy Safety Management

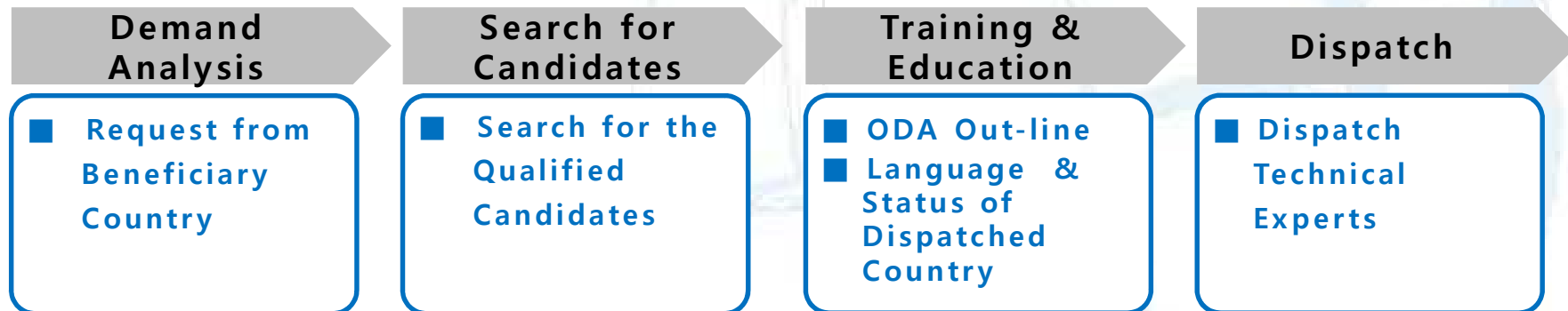
Providing Specialized Energy Safety Management Know-how



V. Suggestion

C. Dispatching Technical Experts

By sharing Korea advanced Energy Safety Management Know-How
Supporting the Improvement of Energy Safety Management System



Main Activity

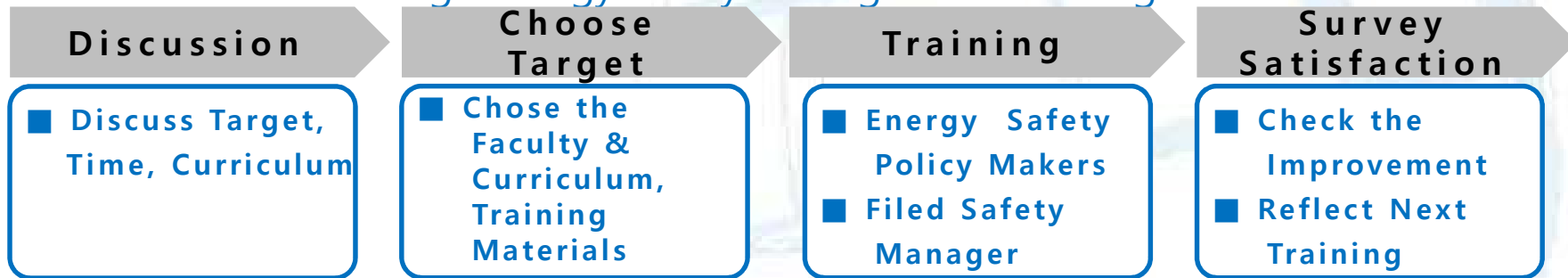
- Legal Advice on transferring Energy Safety Law & Technical Standards
- Technical Advice on Gas & Electrical Facility, Appliance, Component
- Energy Safety Training Advice for Government Officer, Safety Manager
- Advice on the Establishment of Training Center & Testing Lab

V. Suggestion

D. Energy Safety Management Training

Enhancing Energy Safety Management Level

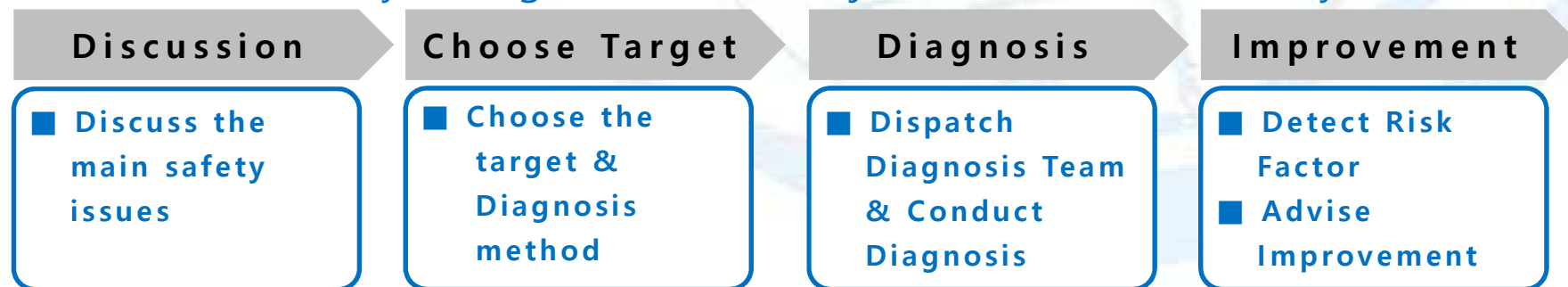
through Energy Safety Management Training



E. Safety Diagnosis for Gas & Electrical Facility

Detecting the Risk Factor & Improving the Level

of Safety Management in the Major Gas & Electrical Facility

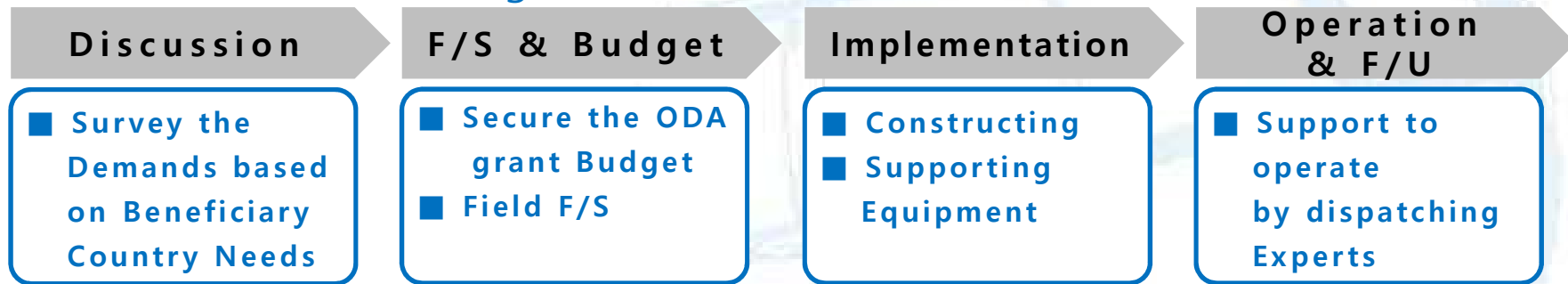


V. Suggestion

F. Support on the Establishment of Energy Safety Facility

Cultivation of Energy Safety Management Experts

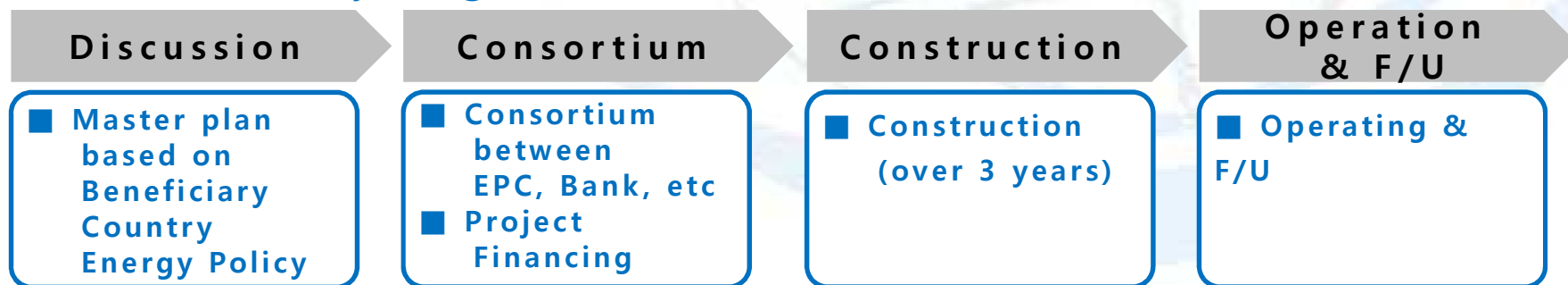
through the Establishment of Facilities



G. Support on the Construction of Energy Infra Facility

Support on the Construction of Energy Infra Facility

by using Korea EDCF Fund, MDB (ADB, etc) Fund



TERIMA KASIH

תודה
Dankie Gracias
Спасибо شكراً
Köszönjük Merci Takk
Grazie Dziękujemy Terima kasih Dékojame
Ďakujeme Vielen Dank Paldies
Kiitos Täname teid 谢谢
Thank You Tak
感谢您 Obrigado Teşekkür Ederiz
Σας Ευχαριστούμ 감사합니다
Bedankt ඔබට ධන්‍ය
Děkujeme vám
ありがとうございます
Tack