

PwC Korea Energy Transition Center







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The Beginning of a Journey toward Sustainability

The majority of companies around the world are changing their business models and operating methods into sustainable models to achieve the goal of net-zero. In particular, the ever-increasing complexity of climate and carbon-related regulations requires organizations to be more agile than ever, and companies must consider this transition as an essential factor for future growth.

Major tasks for companies in responding to climate change (Climate Actions)



Net zero & Decarbonization

Transition to a sustainable business model to respond to the climate crisis

Promoting energy cost efficiency, investing in energy technology with a long-term profit model, or seeking energy transition opportunities to realize potential value



Sustainability Reporting

Enhancing transparency of the value of a company's sustainable business model

As the complexity of climate-related regulations increases, it is increasingly important to report corporate sustainability performance and demonstrate corporate social responsibility



Climate Adaption & Risk

Proactive diagnosis and mid to long-term planning to mitigate climate related risks

It is essential to prepare proactive response measures and secure climate resilience to prepare for possible physical impacts such as various unpredictable climate changes and natural disasters

In order to successfully achieve sustainability, PwC Korea provides comprehensive services through a single team called 'Sustainability Platform', which includes ESG and the emerging Energy Transition as a new business area.

PwC Korea's Sustainability Platform for Sustainability



Energy Transition

Advice on achieving net-zero and renewable energy

- Commercialization strategy and feasibility study for energy transition
- Energy implementation, establishment/operation of JV and SPC
- Respond to global tax (effective tax rate, IPO, etc.) issues
- Establishment of energy policy and system (ex. CHPS)



Sustainability Reporting & Assurance

Integrated advisory to respond to ESG disclosure

- Establishment of strategy for ESG related disclosure/materiality assessment and report preparation
- Greenhouse gas verification/ESG bond certification and responding to rating agencies
- Diagnosis of ESG data management status and establishment of operation system



Sustainability Advisory

Advisory to improve sustainability

- Establishment of ESG strategy, supply chain due diligence, and operation system
- Establishment of climate change scenarios and biodiversity strategies
- Deriving Net Zero implementation plan
- Domestic and international policy and regulatory response strategies (carbon border tax impact analysis, etc.)



Energy Transition, the Foundation for Achieving Sustainability

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Many countries and companies around the world are actively participating in the paradigm to jointly build a 'decarbonization economic system'.

Climate strategies by country



Corporate ESG management strategy



| Country |  EU |  US |  Japan |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Goal for "Net-Zero" by 2050 | | |
| Reduction goal | (~2030) 55% reduction compared to '90 | (~2030) 50%~52% reduction compared to '05 | (~2030) 46% reduction compared to '13 |
| Policy | <ul style="list-style-type: none"> • Carbon Border Adjustment System (CBAM): Regulations on carbon emissions on 6 items, including steel * Pilot introduction since 23.1.1 (carbon emissions reporting period) * Full-scale implementation from 26.1.1 (CBAM certificate purchase/payment) | <ul style="list-style-type: none"> • Inflation Reduction Act (IRA): Clean energy and tax plan for price stability and climate response → Promoting investment of \$369 billion in response to climate change → Regulation on critical minerals and batteries (*25.1.1~) • Clean Competition Act (US-style border carbon tax, CCA) (*25.1.1 implemented, *26.6.30 reported) | <ul style="list-style-type: none"> • Focusing on strategies for green growth for land/cities and decarbonization roadmaps at the regional level in order to realize net-zero by 2050 • Planning to create 100 specific regions to advance decarbonization by 2030 |

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South Korea is also transitioning to a 'net-zero society' with the goal of becoming carbon neutral by 2050, and is making efforts to establish and implement goals to promote development of the environment and economy.



Planning for international carbon reduction: approximately 436 million tons CO2e reduction by 2030 (*compared to 686.3 in 2018)

Responsible net-zero

- Expansion of nuclear power plants and harmony with renewable energy
- "Just transition" and revitalization of circular economy
- Low-carbonization of the country

Active carbon neutrality

- Establishing government-industry governance and improving adaptive capacity.
- Strengthening climate response with major countries such as the US and EU (green ODA and international reduction projects, etc.)
- Establishing an objective management system such as selecting quantitative indicators for each task. Establishing and implementing a cross-sector cooperation system

National net-zero green growth strategy

Innovative net-zero

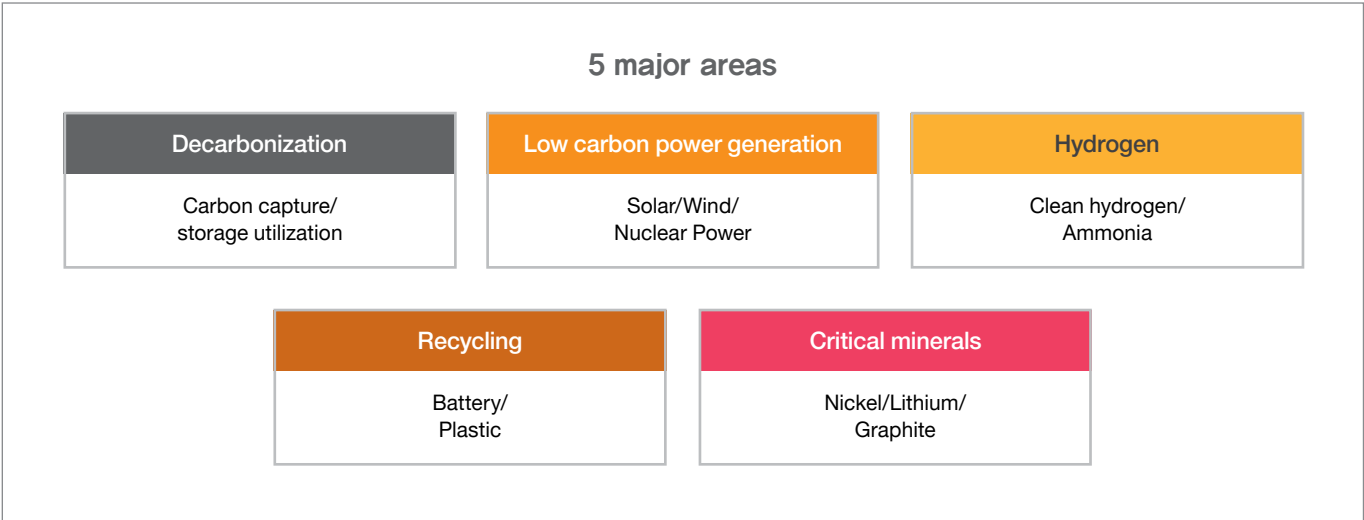
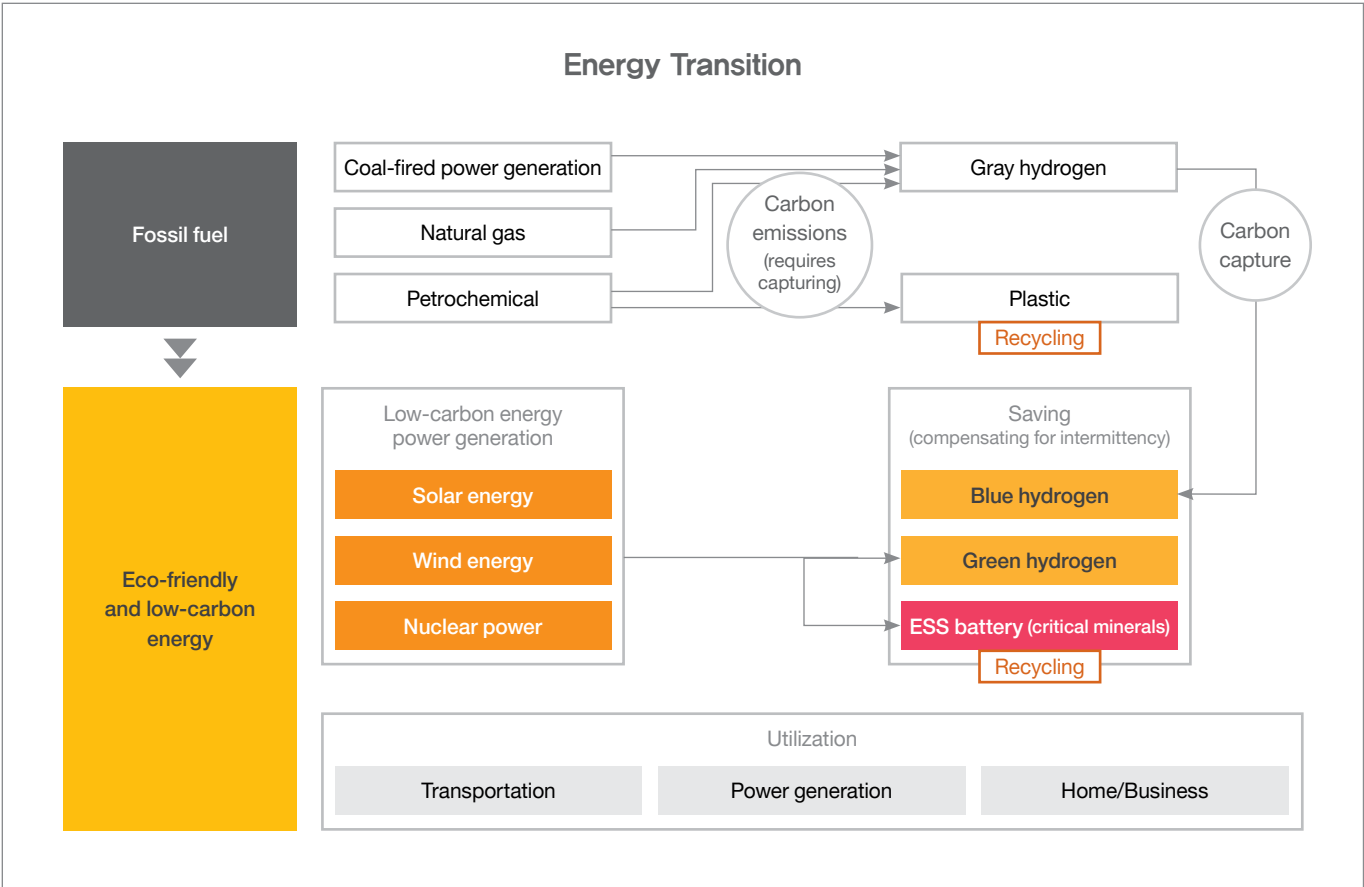
- Accelerating carbon neutrality through improved technological innovation regulations
- Restoration of nuclear power plants, development of zero-emission vehicles, renewable energy, hydrogen industry, and CCUS
- Financial support and investment expansion for climate response

Net-zero altogether

- Reforming systems to reduce energy consumption, saving, raising awareness, and expanding communication
- Establishing and implementing regionally customized carbon neutrality and green growth strategies
- Supporting smooth transition for workers, companies, and regions

The international community has a common goal of 'net-zero' by 2050. To successfully achieve this, the elimination and reduction of the use of existing fossil fuels is essential, and the transition to **energy (hydrogen, carbon neutrality, new and renewable power generation, core minerals, recycling)** is a task that must be implemented. Accordingly, companies must respond preemptively in line with recent trends of the times.

What is Energy Transition? A global movement to transform the existing fossil fuel-based energy system into an **eco-friendly, low-carbon energy system.**



PwC Korea's Energy Transition Service for Successful Energy Transition

In order to participate in the energy transition paradigm, it is important for companies to understand the flow of the energy market, proactively discover business opportunities, and implement strategies accordingly. PwC Korea Energy Transition Center presents strategies optimized for the customer's business maturity at each stage, including establishing a strategy tailored to the company considering sustainability, investing to expand business opportunities, M&A advisory, and discovering new business opportunities.

Strategy & Transformation

We understand the problems customers face from various angles and work hard to discover sustainable business models. We work together to create proactive and innovative business opportunities, including market research, establishing new business strategies, and establishing short to medium-term roadmaps.

Main services

- Establishment of commercial strategies related to decarbonization/hydrogen/low-carbon power generation/recycling/core minerals
 - Market research and business model development (analyzing major players and competitiveness, etc.)
 - Establishment of measures to secure business capabilities and business plans
- Establishment of overseas expansion strategies (USA, Europe, Southeast Asia, etc.)
- Business feasibility analysis (industry analysis, technology analysis, etc.)
- JV negotiation and establishment advisory service
- Commercial and technology due diligence (CDD, TDD, etc.)
- Overseas energy introduction advisory
- Regional coexistence and ripple effect analysis
- Advisory on the establishing a supply chain considering critical minerals
- Advisory on changes in transaction structure (USA, Europe, Southeast Asia, etc.)

Projects and Deals

We provide the best results as industry experts, including economic feasibility review, M&A, and investment/sale-side advisory. We understand the trends of the environmental, social, and economic markets and join our customers in their growth to create sustainable businesses.

Main services

- Sale/acquisition advisory, investment attraction
- Business feasibility study (economic feasibility, etc.) and review on redeemability of principal and interest
- Financial due diligence and tax due diligence
- SPC establishment/operation advisory
- Business structure advisory (including tax structuring)
- Global effective tax optimization advisory
- Global IPO tax advisory
- Hydrogen market (CHPS) bid advisory

Public



Byoung-il
Kim

Jake
Lee

Deals



Yongtae
Suh

Jungtak
Han

Tax



Hong-Hyeon
Kim

Ju-Hyun
So



Regulation

The energy industry is highly influenced by government policy. PwC has formed various working relationships and networks with the government and related public institutions. We quickly understand and respond to key issues within the industry.

Main services

- Research on hydrogen industry ecosystem and establishment of industry development plan
- Advisory on enactment of related business laws and related regulations
- Advisory on response to introduction of low-carbon contracts (battery, pumped water, etc.) in the electric power market
- System design and advisory on response in hydrogen power generation bidding market
- Advisory on mid to long-term business promotion strategy on hydrogen power generation
- Analysis of the impact of electricity market reorganization and changes
- Advisory on response to changes in RPS and ETS systems
- Design of hydrogen infrastructure usage fee and establishment of rate system
- Industrial policy research and application plan for private business operators
- Advisory on energy-related incentives

Green Taxes and Incentives: Carbon Tax, Rebalancing

We provide support to quickly reduce costs and establish a response system for the newly introduced carbon border tax and other related taxes, which are the core of regulations on various critical minerals and batteries.

Main services

- Advisory on Carbon Border Adjustment Mechanism(CBAM, CCA)
 - planning, measurement, Reporting, Verification
- Advisory on tax/tariff related re-usable energy (hydrogen, nuclear power, etc.)
- Advance diagnosis of response to US/European critical mineral regulations such as IRA/CRMA/battery passport, supply chain management due diligence and design advisory
- Advisory NZIA(Net-Zero Industry Act)
- Advisory on various green taxes, cash grants and green tax incentives

Public



Ok-Dong
Yu

Energy Transition



Ji-San
Ym

Tax



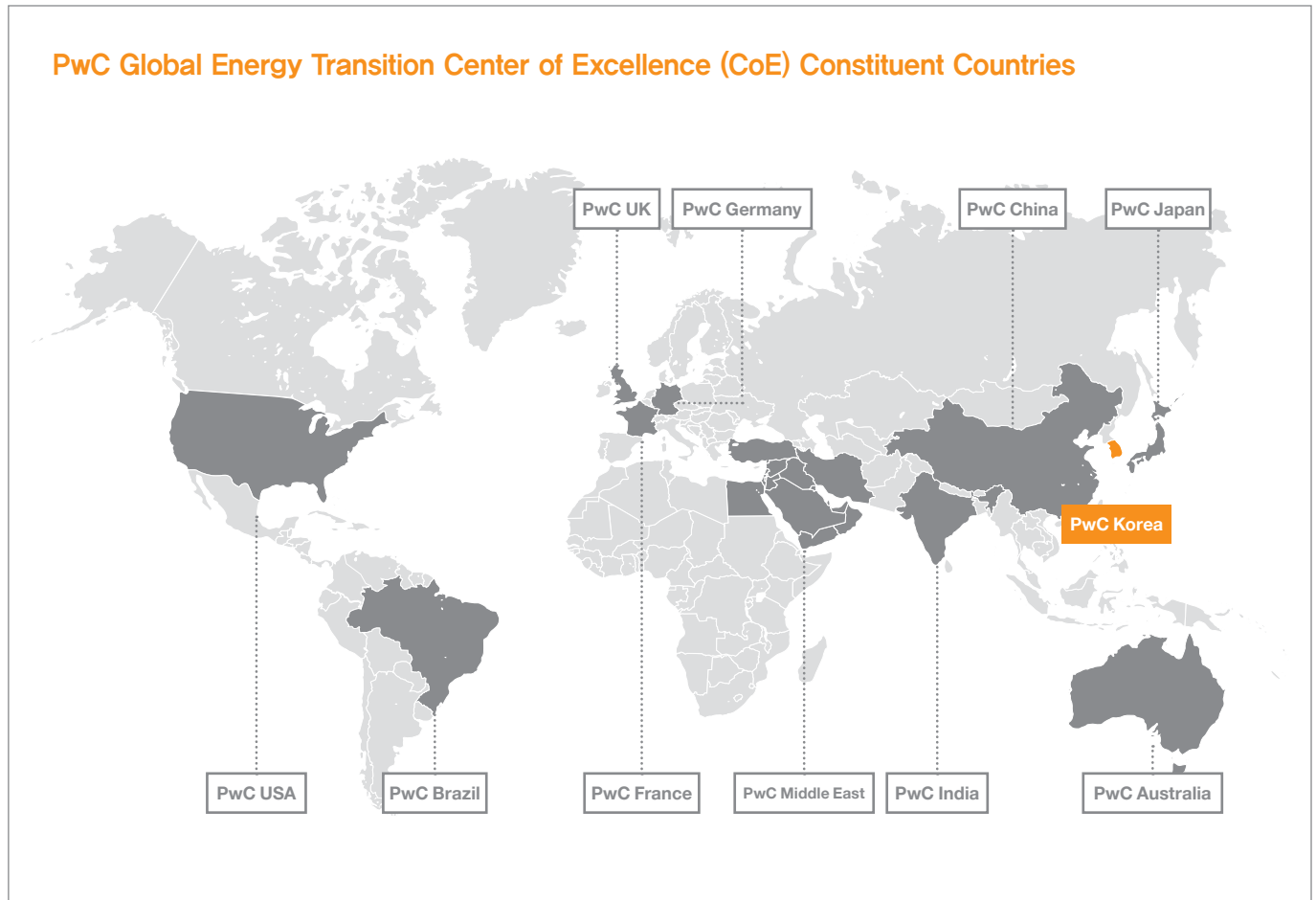
Ju-Hyun
So



PwC Global Energy Transition Centre of Excellence (CoE)

PwC has formed a Global Energy Transition CoE with countries leading global energy transition, such as the US, Europe, Australia, and India, which have extensive experience in carrying out energy-related projects, and are actively sharing networks and case studies. By benchmarking global advanced practices, we will be your best partner for energy transition.

PwC Global Energy Transition Center of Excellence (CoE) Constituent Countries



Global Major Clients



Source: Company Websites



PwC Korea Key Credentials

Decarbonization

- Establishment of carbon emissions business strategy for large domestic holding companies
- CCUS business strategy advisory for domestic engineering companies
- Establishment of overseas e-Fuel business entry strategy for domestic engineering companies
- Carbon emissions consulting FDD for domestic shipping companies
- Carbon border tax advisory for domestic large/mid-sized companies
- Product carbon measurement and system design advisory for domestic large and medium-sized companies

Hydrogen

- Bid advisory on hydrogen (fuel cell) for domestic energy companies
- Investment advisory on the U.S. hydrogen industry for domestic large index company
- Feasibility analysis of overseas hydrogen development projects by domestic engineering companies
- Advisory for foreign energy investment companies on entering the domestic hydrogen market
- Advisory on ammonia/hydrogen introduction strategy for domestic power generation companies
- Advisory on hydrogen/ammonia infrastructure construction and joint use
- Design advisory on hydrogen power generation bid market

Low carbon power generation

- Advisory on strategy and investment related to domestic renewable power generation (wind power, solar power) for overseas investors
- Overseas SMR Alliance business development consulting for domestic public institutions
- Analysis of economic ripple effects of domestic offshore wind power business
- Establishment of entry strategy for domestic energy company into U.S. energy solution market

Recycling

- Establishment of environmental business strategy focused on recycling for domestic construction companies
- Establishment of overseas battery recycling business strategy for domestic holding company
- Feasibility analysis of plastic hydrogenation business for domestic engineering companies
- Domestic mid-sized holding company recycling FDD & Valuation

Critical minerals (nickel, lithium, etc.)

- Advisory on the acquisition of Australian critical minerals by a large domestic company
- Advisory on the acquisition of critical minerals in Southeast Asia by a domestic company
- Feasibility study for domestic battery company in Indonesia
- Establishment of a critical mineral resource security system for domestic public institutions
- Value chain transformation through reorganization of governance and transaction structure
- Advisory for large domestic corporations on their response to US IRA
- Review of regulations by large domestic companies that restrict export of key minerals to Indonesia

Contacts

Sustainability Platform Leader

Steven C Kang Partner
steven.c.kang@pwc.com
02-709-4788

Asia Pacific Sustainability SME

Sean Purdie Managing Director
sean.purdie@hk.pwc.com

Energy Transition

Yongtae Suh Partner
Deals
yong-tae.seo@pwc.com
02-3781-2340

Jung-tak Han Partner
Deals
jungtak.han@pwc.com
02-3781-0165

Hong-hyeon Kim Partner
Tax
hong-hyeon.kim@pwc.com
02-709-3320

Juhyun So Partner
Tax
so.juhyun@pwc.com
02-709-8248

Byoung-il Kim Partner
Public Sector
byoung-il.kim@pwc.com
02-709-7079

Ok-dong Yu Partner
Public Sector
ok-dong.yu@pwc.com
02-3781-0128

Jake Lee Partner
Public Sector
jake.lee@pwc.com
02-3781-0129

Ji-san Ym Partner
Energy Transition
ji-san.ym@pwc.com
02-3781-9236

Reporting & Assurance

Miyop Kwon Partner
Sustainability
miyop.kwon@pwc.com
02-709-7938

Jae-kyoung Shim Partner
Sustainability
jea-kyoung.shim@pwc.com
02-709-7083

Jin-kyu Lee Partner
Sustainability
jin-kyu.lee@pwc.com
02-3781-9105

Bo-hwa Lee Partner
Sustainability
bo-hwa.lee@pwc.com
02-3781-0124

Doyeon Kim Partner
Sustainability
kim.doyeon@pwc.com
02-709-4079

Kyongsang Park Partner
Sustainability
kyongsang.park@pwc.com
02-3781-0029

Yun-goo Kwak Partner
Sustainability
yun-goo.kwak@pwc.com
02-3781-2501

www.samil.com

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