

National Agenda with Climate and Environmental Policy Direction for Sustainable Future

Perspective of German companies on the energy policy of the new Korean Government



Mehr Wert.
Mehr Vertrauen.

Add value.
Inspire trust.

September 20th, 2022

TÜV SÜD Korea Ltd.

Dr. Helge Knobbe

Organized by:



TÜV SÜD at a glance

By choosing TÜV SÜD, a dedicated team of global experts is committed to help you manage risks and access global markets through a comprehensive portfolio of technical solutions.

- Our logo is universally respected as an independent and impartial symbol of safety, security and sustainability.
- TÜV SÜD certification marks and certificates represent third-party endorsement by a globally renowned organisation, while our personnel certificates provide our customers with greater market opportunities.



1-STOP
SOLUTIONS
PROVIDER

150 +
YEARS OF SAFETY,
SECURITY &
SUSTAINABILITY

1,000 +
LOCATIONS
WORLDWIDE

25,000+
EMPLOYEES

€2.7
BILLION IN ANNUAL
REVENUE



100%
INDEPENDENT
& IMPARTIAL



55,000
SYSTEM
CERTIFICATES



500,000
PRODUCT
CERTIFICATES



50,000
PERSONNEL
CERTIFICATES



Adding value across the business lifecycle

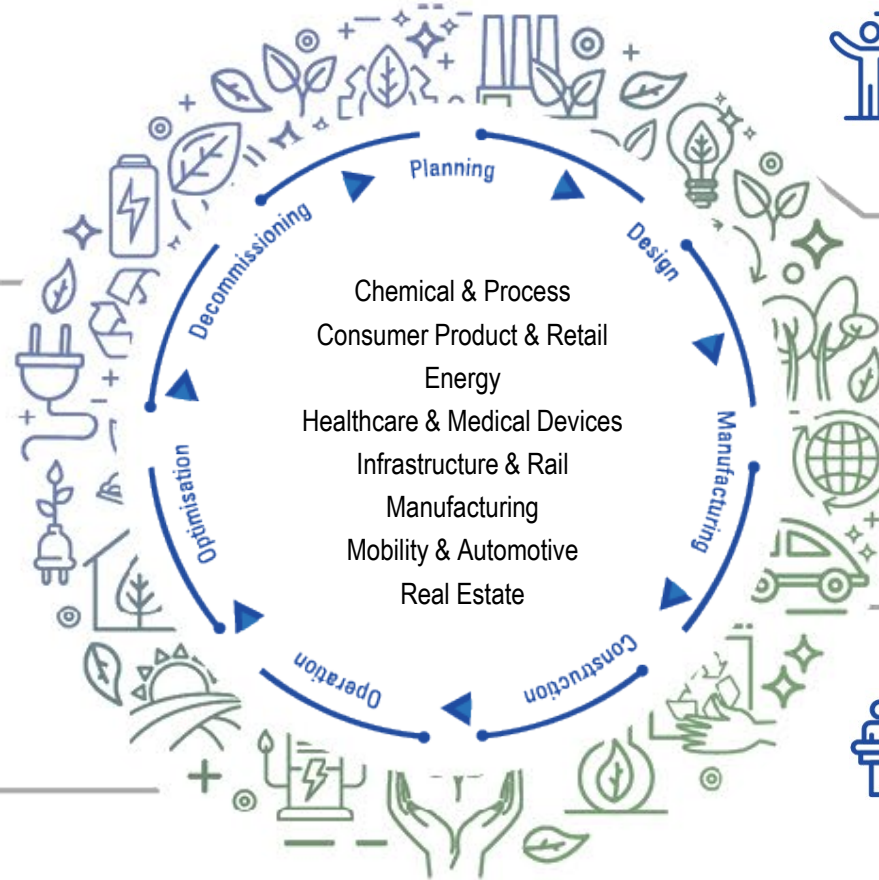
Testing and product certification

We provide internationally-accredited independent product testing services in accordance with international standards through a global network of testing laboratories.



Auditing and system certification

We audit and certify management systems for all industries, ensuring your value chain complies with requirements for quality, performance and IT security according to international, national and other relevant standards.



Training

We support people and organisations to enhance performance through a wide range of work safety, technical, management systems, executive training programmes and certified qualifications.



Inspection

We independently verify that, at every stage, your systems, processes and procedures comply with the relevant codes, requirements, regulations and standards.



Advisory

We provide advisory on a wide range of topics from quality, safety and risk to environmental protection, regulatory requirements and process optimisation.



Our legacy: 150+ years of business success

1866

On 6 January, 22 industrialists united to establish the Steam Boiler Inspection Association Baden in Mannheim.

1881

The first boiler safety standards were agreed, paving the way for uniform technical inspections.

1906

Our first vehicle periodic technical inspection was conducted.

1921

Environmental advocacy began with our publication of a report addressing dust pollution.

1938

The launch of a standardised nationwide system created 14 regional inspection associations named TÜV. There were 17 TÜVs by 1941.

1951

TÜV organisations were tasked with performing regular inspections of all motorised vehicles.

1964

Expansion beyond Europe began with a cable car accident investigation in Cape Town, South Africa.

1989

TÜV Product Service GmbH was launched, pioneering the concept of worldwide approvals.

1991

Asian subsidiaries were launched in China, Hong Kong, Japan, Korea and Taiwan in 1994, with American subsidiaries set up around the same time.

1996

The TÜVs from Germany's southern states united to form TÜV SÜD.

2006

Acquisition of Singapore's PSB Group as a regional hub in the ASEAN region. Launch of TÜVTÜRK in the following year.

2014

Further expansion internationally with acquisition of 6 companies in Singapore, Turkey and USA.

2016

Celebration of 150th anniversary along with the acquisition of ATISAE in Spain and launch of two Digital Service Centres of Excellence in Germany and Singapore.

2018

Launch of digital academy in India and Singapore and new labs in Canada, USA, India and Vietnam. In the same year, the corporate claim was changed to "Add value. Inspire trust."

2019

Inauguration of a testing lab for electric vehicle batteries in China, and a new centre of excellence for subsea pipelines in Scotland.

2020

Inauguration of a new battery testing lab in China and a new testing facility for product, material and component testing in Italy.


2021

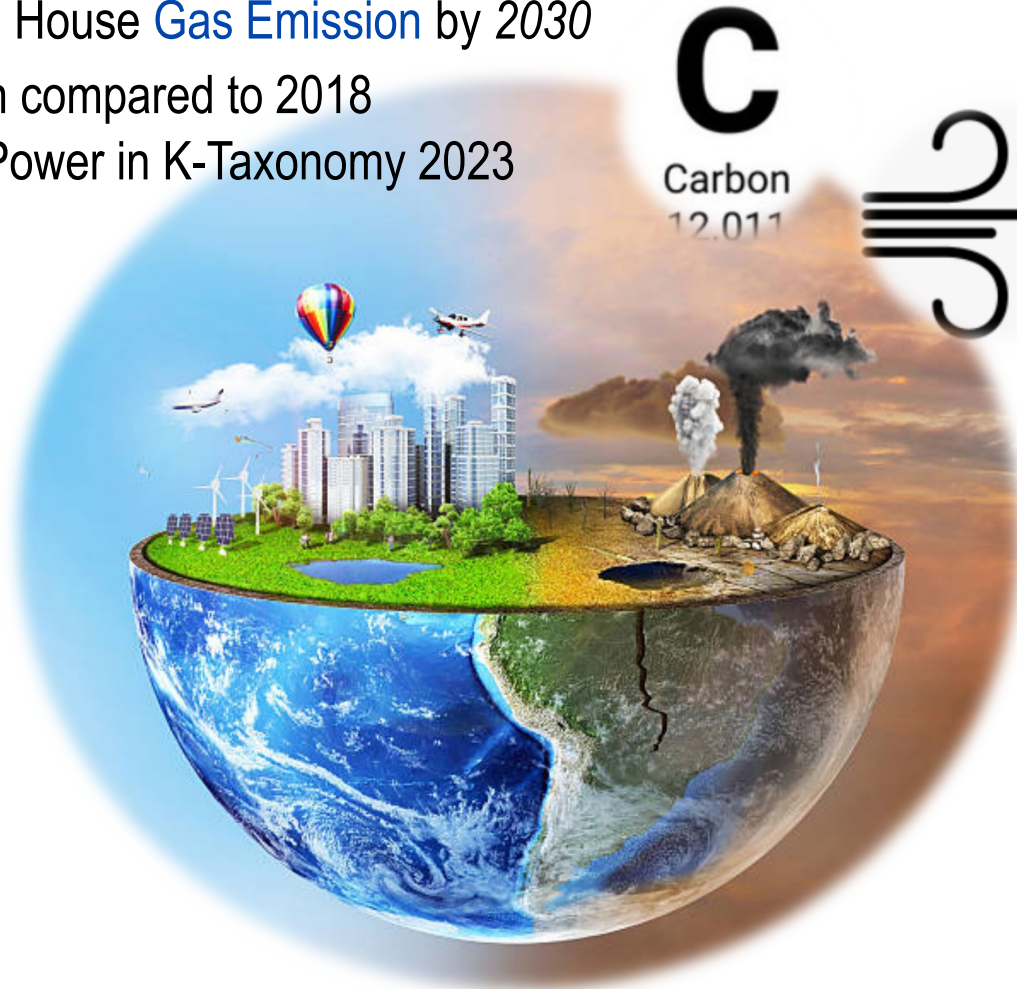
Investment in a new electric vehicle battery lab in China and a hydrogen lab in Germany. Launch of a S\$100 million regional hub in Singapore, the first significant real estate investment outside Germany.

2022

TÜV SÜD actively pursues a strategy of digitalisation and sustainability. The Group is committed to driving sustainability with innovations.

Green Economy Policy – Carbon Neutrality & Air Quality

 National Green House Gas Emission by 2030
40% reduction compared to 2018
 With 'Nuclear Power in K-Taxonomy 2023



Air Quality - free of **fine dust** (PM2.5) by
30% by reducing fossil fuel base
 How?
 -Diesel Vehicles & Greenhouse Gas Standards
 -Reduction in the coal power
 -Reduction in emission of air pollutants for each air control zone by **50%**

Circular Economy & New 5 Green Industries

New Green Industry: Circular Economy System with 'Act on Promoting Circular Economic Society'

Reduction in waste
↓



↑ Increase in recycling



Implementation Plan

- (i) Mandatory use of high-quality **renewable** plastic materials
- (ii) Recycling of waste plastics, which are difficult to be recycled, as petroleum/chemical raw materials or hydrogen fuels via thermal decomposition

New Five Major Green Industries

e.g., Climate tech
Environment IoT
Biogas

Chemical Substance Management System

- (i) Enhance the public safety
- (ii) Reduce corporate burdens ↓
- (iii) Control on hazardous substances in characteristics and volume – Public Health
- (iv) Expansion of the environmental health services for the public



Leading to Regulatory Changes in ESG

Press: Mayor Energy-related topics

Korea Joong Ang Daily
August 30, 2022

Yonhap News
February 21, 2022

Yonhap News
September 09, 2022

The Korea Times
May 10, 2022

Korea's Yoon backtracks on renewables and ups nuclear in energy mix



Power supply monitoring room at Kepco's office in Seoul in August. [YONHAP]

Renewable energy in Korea's energy mix will be reduced while nuclear will be increased under the first energy plan of the Yoon Suk-yeol administration.

This is a reversal from the policy of the Moon Jae-in government.

Yoon's renewable goal will be 21.5 percent of the total, down from Moon's 30-percent target. The president will take nuclear to 32.8 percent from the previous government target of 23.9 percent.

Yoon vows to scrap nuclear phase-out policy

SEOUL, Feb. 21 (Yonhap) — Main opposition presidential candidate Yoon Suk-yeol on Monday vowed to scrap the current Moon Jae-in government's nuclear phase-out policy, saying he will make South Korea a powerhouse in nuclear power generation.

Yoon will recover the ecosystem of nuclear power generation and advance safe nuclear technologies so that they can become a core engine to drive the country," Yoon of the People Power Party emphasized that it is a global trend to use nuclear power generation along with other energy sources to reduce carbon and lessen the dependence on foreign countries for energy, adding that the European Union Taxonomy recently labeled nuclear power as green energy.

President Emmanuel Macron reversed his words of "nuclear phase-out" five years ago and "11-turn to nuclear power," Yoon said. "After nuclear phase-out, Italy lost its energy because a country that imports the most electricity in Europe."

Yoon's energy plan will not work, he said, because the government is already breaking away from its plan to build additional plants while retiring old ones.

It will reduce the portion of nuclear power to 7 percent by 2030 and will be replaced by renewable energy, Yoon said. "China and Russia when there is a shortage of nuclear power are installed on our entire soil."

The country's leading nuclear power technologies are dying, he said.

Yoon said he is the best for our national interest, not about biased



Yoon Suk-yeol, the presidential candidate of the main opposition People Power Party (PPP), wears a TV studio in Seoul to attend his campaign commercial in Seoul on Feb. 20, 2022. (Post press) [Yonhap]

KEPCO units plan to slash investment in renewable energy

All News • 08:00 September 09, 2022

Six affiliates of the state-run Korea Electric Power Corp. (KEPCO) plan to slash investment in renewable energy over the next five years as they are under pressure to improve financial health, according to a report on Friday.

including Korea Energy and Korea East-West Power, will slash their investment by a combined 2.1 trillion won (US\$1.5 billion) until 2026, the report showed.

The report was compiled by the office of Rep. Kim Yong-min of the main opposition Democratic Party.

Kim criticized the KEPCO affiliates for running counter to the global trend of increasing investment in renewable energy.

Increasing renewable energy is essential for our companies' national competitiveness and growth," Kim said, calling for the KEPCO units to expand their investment in renewable energy.

KEPCO and its affiliates chalked up widening losses due to soaring energy costs.

South Korea plans to expand its generation of nuclear power to nearly 33 percent of its electricity generation by 2030 in a move to boost energy security and to better meet net-zero targets, officials said.

Under the plan, renewable energy will take up 21.5 percent of the country's total electricity generation by 2030, with the figure for coal standing at 21.2 percent and liquefied natural gas at 20.9 percent.



The Seoul headquarters of Korea Electric Power Corp. (Yonhap)

Korea to accelerate transition to hydrogen economy under Yoon administration



By Park Jae-hyuk

The newly launched Yoon Suk-yeol administration is expected to speed up its efforts for Korea's transition to a hydrogen economy, benefiting relevant companies such as Doosan Fuel Cell and Hyundai Advanced Materials, according to market analysts, Tuesday.

The hydrogen economy — which, if based on green hydrogen, is regarded as a path to achieving carbon neutrality — refers to an economy that relies on hydrogen as a commercial fuel.

When the presidential transition committee announced 140 national tasks last Tuesday, it vowed to stabilize the production and supply of "green" and "blue" hydrogen — which refer to hydrogen generated by renewable energy and hydrogen produced from natural gas, respectively — for Korea to become a global leader in the hydrogen industry.

"With the expanded use of various energy sources, such as renewable energies and hydrogen, we will enhance the self-sufficiency of energy and create more jobs," the transition team said.

Eugene Investment & Securities analyst Han Byung-hwa expected the nation's overall hydrogen industry to accelerate its growth, considering that the new Cabinet members have a solid understanding of the relevant businesses.

"The transition team also announced its plan to support hydrogen vehicles," the analyst said.

After a revision to the Hydrogen Economy Promotion and Hydrogen Safety Management Act was passed by the National Assembly's Trade, Industry, Energy, SMEs, and Startups Committee on May 4, uncertainties about the nation's hydrogen industry have been reduced further.

The revised bill is intended to offer financial support to the hydrogen industry and to obligate electric utility companies to use green and blue hydrogen.

Domestic companies have been urging lawmakers to pass the revised bill, so that they can make investments under specific guidelines.