

Climate change mitigation and climate adaptation in German - Vietnamese cooperation

Regulations

Planning

Biomass

Wind

Grid

Credibility

Excellence

Happiness

Responsibility

Interdependence



an active
**INDEPENDENT
THINK TANK**
since 8/2018

Research

Expertise

Consultancy

Training

Dialogue

Scenarios

Modeling

Economics

Integrated assessment

International experience

Our MISSION

Accelerate the

Energy Transition of Vietnam

toward a

Carbon-neutral Society

in a Sustainable and Reliable manner

Topic of studies

Power system transition

1. Coal abatement
2. Options for wind power development to 2030
3. Biomass co-firing and Renewable Standard Portfolio
4. Scenarios for Solar power development to 2030
5. Net-zero roadmap for SOEs Power grid (2023)
6. Storage (2023)

Power Infrastructure System

1. Recommendation on revised electricity law.
2. Grid integration for offshore wind to 2030
3. Grid capacity for onshore wind and solar integration to 2022 and 2025
4. Grid planning up to 2025 and 2030
5. Grid relocation infrastructure (2023)

Finance mechanism

1. Auction mechanism
2. Virtual power plant
3. Super-ESCO: Investment mechanism
4. Green bonds, Carbon market
5. Electricity price forecast.
6. Mechanism to mobilize investment capital for the transmission system in Vietnam

Offshore wind energy

1. Strategy recommendation
2. Potential zone and mechanism for sea surface exploitation
3. Policy recommendation on ESIA;
4. Supply chain and local content;
5. Distance between wind farms and wind turbines
6. Energy port planning
7. Grid integration.

Capacity building

1. Design training framework for policymakers (2023)
2. Design training framework for experienced engineers (2023)
3. Green Jobs application (2023)

Database System

Power System
Operating Data

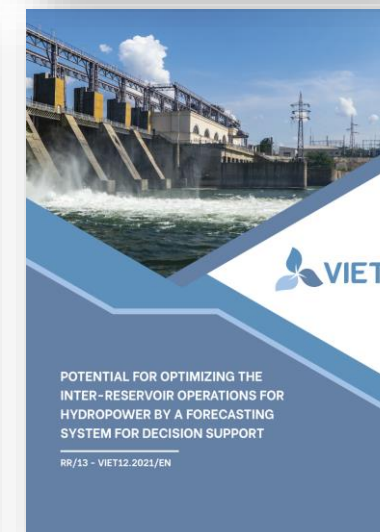
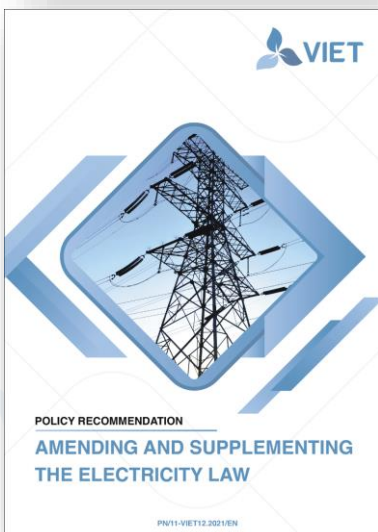
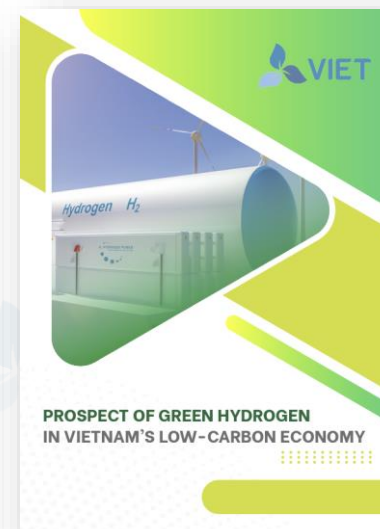
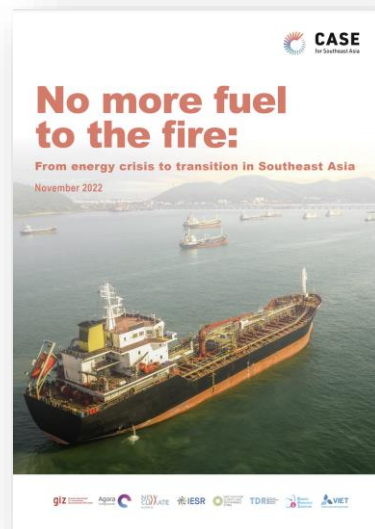
Waste Map

Energy Transition
Stories

RE forecast

Grid Transmission

2022's publications



Bottlenecks for effective climate protection actions

- The lack of technical expertise and knowledge in sustainable energy systems, climate-resilient infrastructure, and other relevant areas.
 - By working together, researchers and practitioners from both countries can share knowledge, expertise, and best practices and collaborate on developing innovative solutions that are tailored to local needs.
- The lack of access to climate mitigation and adaptation project financing.
 - Cooperative research can help identify sources of financing, such as climate funds, and develop public financial instruments conducive to investment in sustainable technologies and infrastructure.
- The lack of policy and governance-related.
 - Researchers can identify gaps and opportunities for exchange experiences by analyzing policy frameworks and governance structures and recommending more effective policy and governance systems.
- Public awareness and engagement are key to achieving effective climate protection actions.
 - Through cooperative research, researchers can develop innovative communication and outreach strategies that engage the public and foster a culture of environmental awareness and responsibility.

Research questions will be relevant in 2030, 2040 and 2050

Energy Transition:

- How can we accelerate the deployment of renewable energy technologies, such as wind, solar, and geothermal, to reach a carbon-free electricity system?
- What are the most promising energy storage technologies and how can we improve their efficiency and affordability?
- How can we incentivize consumers to adopt more sustainable energy behaviors, such as using smart grids, reducing energy consumption, and choosing renewable energy sources?
- What are the key barriers to scaling up renewable energy in developing countries, and how can they be overcome?
- How can we ensure that the energy transition is just and equitable, particularly for marginalized communities and workers in fossil fuel industries?

Greener Transportation:

- How can we shift transportation systems from fossil fuels to electric, hydrogen, and other low-carbon technologies?
- What are the most effective policies and incentives for encouraging people to use public transportation, active transportation modes (e.g. biking and walking), and shared mobility services?
- How can we reduce the carbon footprint of aviation and shipping, which are among the most carbon-intensive modes of transportation?
- How can we ensure the transition to greener transportation is accessible and equitable for all, particularly low-income communities and rural areas?
- How can we design and integrate transportation systems to reduce emissions and improve the quality of life in urban areas?

Sustainable Urban Development:

- How can we design and construct energy-efficient buildings, carbon-neutral and resilient to climate change impacts?
- What are the most effective policies and incentives for promoting sustainable building practices, such as green roofs, passive solar heating, and high-efficiency HVAC systems?
- How can we integrate renewable energy sources like rooftop solar into building design and construction?
- How can we ensure that sustainable urban development is socially and economically inclusive, particularly in low-income neighborhoods?
- How can we use data and technology to optimize building performance, reduce energy consumption, and improve indoor air quality?
- What is the gap between technology and policy to implement the solutions support for sustainable urban development?

Conclusion



- Decision-making based on scientific evidence
- Support for Independent Voice from Scientists
- Involve the Policymakers in the peer-review process of scientific papers
- Bilateral cooperation can also foster exchange and collaboration between scientists, researchers, and innovators from both countries, leading to joint research projects, joint publications, and joint patent applications.
 - For Vietnam, cooperation with Germany can provide access to advanced technologies, knowledge, and expertise, which can help the country to build its own scientific and innovation capabilities.
 - For Germany, cooperation with Vietnam can provide access to new markets and opportunities for collaboration in science and innovation technology adapt to the real needs of developing countries.