

Continued Strength in the Energy Trilemma and Evolving Energy Dynamics

As of 2024, Slovenia has impressively maintained its global rank at 11 in the World Energy Trilemma Index, showcasing robust performance in managing energy security, equity, and sustainability amidst global challenges. This achievement highlights Slovenia's resilient energy framework and strategic advancements in the face of geopolitical tensions, notably the impacts stemming from conflicts like the war in Ukraine, which have influenced energy supply security across Europe. The year 2024 marks a pivotal phase in Slovenia's energy sector, reflecting on the theme "Redesigning Energy with Diversity". This theme emphasizes a comprehensive and inclusive approach, showcasing how diversity in energy solutions and community involvement can catalyze a robust energy transition.

Changes Since the Last Iteration

Since the last iteration of the World Energy Issues Monitor in 2022, Slovenia has seen significant advancements in its energy sector, particularly in integrating renewable energy sources and enhancing energy efficiency. The acceleration towards decommissioning coal-powered plants and boosting renewable energy investments has been propelled by enhanced government policies and increased collaboration between the public and private sectors. These changes are driven by Slovenia's commitment to European Union's (EU) climate targets and the global shift towards sustainable energy practices.

Five-Year Country Trends

Over the last five years, Slovenia has observed a steady increase in the deployment of renewable energy technologies, such as solar and wind, coupled with significant advancements in **energy storage solutions**. This trend is accelerating, driven by technological innovations and a supportive policy environment that encourages the adoption of green energy solutions. Moreover, public awareness and community-driven energy projects have gained momentum, fostering a more inclusive approach to energy transition. Concurrently, Slovenia has demonstrated stable energy security, supported by a diverse energy mix and significant investments in smart grid technologies. The commitment to phasing out coal by 2033 and restructuring coal regions aligns with the EU's ambitious climate targets and the principles of a just transition, positioning Slovenia for future sustainability while navigating the complexities of energy security and supply.

Leadership in Community Integration

Leadership in **integrating people and communities** in Slovenia's energy transition is emerging strongly. The government and local energy companies are increasingly engaging with communities through consultative processes and collaborative projects that not only address the energy needs but also ensure that these solutions are sustainable and beneficial at a local level. Initiatives focusing on energy education and local energy cooperatives are prime examples of how Slovenia is fostering community involvement in its energy strategies.

Technological Innovations and Social Integration

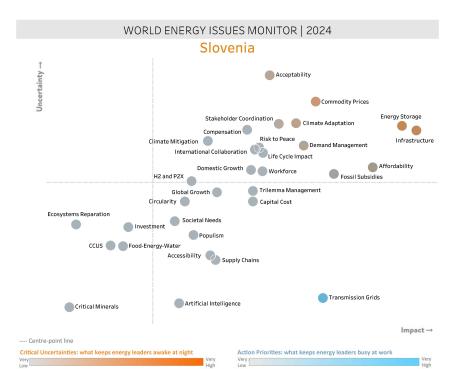
Slovenia's energy sector has embraced significant **technological advancements,** including renewable energy integrations and potential expansions in nuclear power, as part of its strategy to increase energy self-sufficiency and independence. The ongoing debate on building a second unit at the Krško nuclear plant underscores Slovenia's proactive approach to securing a sustainable energy future in alignment with EU directives and the evolving global energy landscape.

Insights from the 2024 Issues Survey Results

- <u>Scaling Up Energy Transitions</u>: The results underscore Slovenia's progress towards faster, fairer, and more far-reaching energy transitions. Emphasis on scaling up involves expanding renewable energy capacities and integrating smart energy systems that enhance grid stability and energy efficiency. Additionally, the development of a robust and modern electricity infrastructure is critical to support the increasing share of renewable energy sources and to ensure a reliable and efficient energy supply.
- <u>Policy and Ecosystems:</u> The development of transparent, transformational, and trustworthy policies is evident. Slovenia has made strides in creating a regulatory framework that supports innovation, facilitates the deployment of new technologies, and ensures that energy transitions are equitable and inclusive.
- <u>Climate Risk and Resilience</u>: The focus on climate risk and resilience has intensified, with Slovenia adopting more robust measures to mitigate climate impacts and enhance the adaptability of its energy systems. This includes strengthening infrastructural resilience against extreme weather events and integrating climate risk assessments into energy planning.
- Resource Allocation and Active Management: Effective resource allocation and active management are highlighted as key areas of success. Slovenia is optimizing resource use by directing investments towards sustainable energy projects and ensuring efficient money flows within the energy sector, particularly in funding initiatives that promote energy diversity and resilience.

A Future-Focused Approach

In 2024, Slovenia's energy transition strategy reflects a comprehensive approach that prioritizes diversity, community integration, and sustainability. By continuing to adapt and innovate, Slovenia not only meets its energy needs but also contributes to setting a global standard for inclusive and sustainable energy practices. The proactive engagement of all stakeholders, coupled with a strong focus on policy, ecosystem development, and resource management, ensures that Slovenia remains at the forefront of the global energy transition.





AcknowledgementsSlovenia Member Committee