

## Parliamentary Web Dialogue

# The Clean Energy Revolution and its Implications for the OSCE region

4 February 2022, 14:30 – 17:00 CET

*Online*

### **Highlights**<sup>1</sup>

#### **EXECUTIVE SUMMARY**

Building on the *General Committee on Economic Affairs, Science, Technology and Environment 2021 Report*<sup>2</sup> and the Parliamentary Plea for Resolute Climate Action<sup>3</sup> issued by the Committee leadership in early November 2021, the Assembly held the Parliamentary Web Dialogue “The Clean Energy Revolution and its Implications for the OSCE region” on 4 February 2022. The goal of the event was to assess current energy trends, consider the latest technological developments, and explore potential geopolitical, socio-economic, and environmental implications of the energy transition. Moreover, it served as a forum for interdisciplinary knowledge-sharing and promoted policy convergence around the need for carbon-neutral, affordable, and sustainable energy strategies, in line with citizens’ expectations and security needs. Ultimately, the web dialogue confirmed the centrality of decarbonized energy policies for European security and reinforced the Assembly’s determination to engage in this domain, which bridges economic and environmental security aspects.

Moderated by **Mr. Marco Bonabello**, Director for Economic & Environmental Security at the OSCE PA International Secretariat, the policy dialogue was opened by **Ms. Margareta Cederfelt**, President of the OSCE PA, **Mr. Pere Joan Pons Sampietro**, Chair of the OSCE PA General Committee on Economic Affairs, Science, Technology and Environment, and **Ms. Leonore Gewessler**, Austrian Federal Minister of Climate Action, Environment, Energy, Mobility, Innovation and Technology. In their welcoming remarks, the speakers stressed how rethinking the way energy is produced, transported, stored and consumed is instrumental to mitigating the climate and environmental crises that are affecting our planet. Bearing in mind the consequences that go far beyond the energy sector, this topic should be at the top of the security agenda of the OSCE participating States.

---

<sup>1</sup> DISCLAIMER: The Highlights from the OSCE PA Web Dialogue are not intended to be official conclusions, nor an exhaustive list of all issues raised during the discussion, but rather a collection of interesting points noted by the International Secretariat for possible future reference. As such, the OSCE Parliamentary Assembly makes no claims nor warranties of any kind, expressed or implied, about their completeness and reliability.

<sup>2</sup> [2021 Report for the General Committee on Economic Affairs, Science, Technology and Environment](#), OSCE PA, 2021.

<sup>3</sup> [A Parliamentary Plea for Resolute Climate Action](#), OSCE PA, 5 November 2021.

High-level guest speakers included **Dr. Angela Wilkinson**, CEO and Secretary-General at the World Energy Council, **Mr. Keisuke Sadamori**, Director for Energy Markets and Security at the International Energy Agency, **Mr. Miguel Gil Tertre**, Head of Economic Analysis & Foresight, Directorate-General for Energy at the European Commission, **Mr. Enrico Falck**, Executive Chairman at Falck Renewables S.p.a., **Dr. Kirsten Westphal**, Executive Director, Research & Analysis at the H2Global Stiftung and **Dr. Katja Yafimava**, Senior Research Fellow at The Oxford Institute for Energy Studies. Collectively, they explained how the clean energy revolution is unfolding in the OSCE region, how it is already affecting our lives and what can be expected for the future. Notably, they stressed that such a systemic change is not a “flip switch” with a linear trajectory. On the contrary, it implies uneven roads paved with both uncertainties and opportunities. Finally, they put forward several proposals on how to foster a fair and viable “greening” process of the energy system, thereby setting the scene for a lively debate among the over 100 participants.

Closing the event, **Ms. Gudrun Kugler**, Rapporteur of the OSCE PA General Committee on Economic Affairs, Science, Technology and Environment, thanked all speakers and participants and concurred about the importance of making timely, well-informed and coherent policy decisions in this field. Accordingly, while reiterating that the clean energy revolution is pivotal to economic and environmental security and global development, she stressed the need for policy-makers to carefully study and balance all foreseeable socio-economic implications. In particular, she cautioned against overlooking the possible social costs of the energy transition and proposed to avert new forms of poverty through targeted measures in support of the most exposed and vulnerable groups. Ultimately, the energy transition should aim at achieving more diversified, accessible, reliable, and affordable energy, thereby paving the way for more secure, inclusive, and healthy societies.

## KEY FINDINGS

### TRENDS

- To keep the goal of limiting temperature rise to 1.5 degrees Celsius within reach, half of global emissions must be cut by the end of this decade. Since over 70% of human-caused greenhouse gas emissions stem from **the energy sector**<sup>4</sup>, “greening” the latter **holds the key**<sup>5</sup> **to addressing both climate change and environmental degradation**<sup>6</sup>. Accordingly, by the end of the COP26 climate summit in Glasgow, 151 countries submitted new climate plans to slash their emissions by 2030. To fully meet the Glasgow Agreement, **clean energy investments need to triple by 2030**<sup>7</sup>.
- The **global energy market has proved increasingly unstable lately**, as illustrated by the high volatility of prices. Today, Europe finds itself at the heart of an “**energy storm**” prompted by, *inter alia*, a combination of supply bottlenecks, limited storage, and the rebounding of the economy after the COVID-19 crisis. Therefore, **enhancing and diversifying energy supplies** towards clean energy sources **is crucial for guaranteeing stable and affordable development opportunities** for all human needs throughout the OSCE region.

---

<sup>4</sup> [Countries strike deal at COP26 climate summit after last-minute compromise on coal](#), CNBC, 13 November 2021.

<sup>5</sup> [Net-Zero by 2050: A Roadmap for the Global Energy Sector](#), IEA, May 2021.

<sup>6</sup> Not only is energy production the largest driver of climate change, but the burning of fossil fuels also comes at a large cost to human health.

<sup>7</sup> [The IEA at COP26](#), IEA, 29 October 2021.

- **The current European energy market** relies heavily on fossil fuels coming from a relatively small number of producers. **This dependency on fossil fuels, notably gas, leads to a lack of resiliency:** any modification in prices and volumes of fossil fuels has a direct impact on energy and electricity prices<sup>8</sup>.
- In the long run, **fossil fuel energy** - which includes oil, coal, and gas - **is constrained by too many environmental and social drawbacks.** Fossil fuel energy depletes the environment and accelerates climate change, thereby stimulating further socio-economic shocks and geopolitical tensions.
- **The energy transition is therefore urgent and represents one of the most important topics of our time.** Intended as the global energy sector's shift from fossil-based systems of energy production and consumption (including oil, natural gas, and coal) to cleaner energy sources (such as renewables and low-carbon hydrogen), **it implies gradual changes, structural ruptures, as well as systemic shifts.** The effects of the energy transition will be felt far beyond the energy system as **geopolitical, socio-economic, and environmental consequences** are expected.
- **The decarbonization<sup>9</sup> of the power, building, transport, heating, cooling, and industry sectors is essential** to support the transition to a low-carbon and more resilient future. Those sectors are currently unequally decarbonized, with **the power sector at the forefront of the decarbonization process** in many countries. Heating and cooling are particularly critical as they often represent a significant portion of a country's energy consumption<sup>10</sup>.
- **Renewable energy including wind power, solar power and hydropower is central to the energy transition.**<sup>11</sup> Each country is endowed with **renewable resources** such as strong sunlight, high wind, or a natural flow of moving water, which offer the possibility to generate clean energy and feed the growing energy demand at increasingly affordable prices, especially when compared to more traditional energy sources.<sup>12</sup>
- **Low-carbon hydrogen<sup>13</sup> and nuclear fusion<sup>14</sup>** are two non-renewable, clean energy sources that are likely to become increasingly promising and viable in the coming decades. Accordingly, research and investments are expanding to explore this field.
- **The role of private business and citizens' cooperatives** in advancing the clean energy transition is critical. Appropriate financing solutions are needed as public resources would not be sufficient to meet the identified investment gap. **Incentivizing private initiatives and mobilising private capital is crucial to meet existing transition targets.**

---

<sup>8</sup> Similarly, price efficiency is not reached by the European energy market, being highly dependent on fossil fuel prices, which are more expensive than renewables.

<sup>9</sup> Decarbonization is the reduction of carbon dioxide emissions using low-carbon power sources and thereby achieving a lower output of greenhouse gasses into the atmosphere.

<sup>10</sup> For instance, heating and cooling represent half of the European Union's energy consumption.

<sup>11</sup> Major types of renewable energy sources may also entail biomass, wood and wood waste, municipal solid waste, landfill gas and biogas, ethanol, biodiesel and geothermal.

<sup>12</sup> Renewables are already significantly undercutting fossil fuels as the world's cheapest source of energy. Of the wind, solar, and other renewables that came on stream in 2020, nearly two-thirds – 62% – were [cheaper than the cheapest new fossil fuel](#), according to the International Renewable Energy Agency (IRENA).

<sup>13</sup> Low-carbon hydrogen is hydrogen that is made in a way that creates little to no greenhouse gas emissions. This means that low-carbon hydrogen has a smaller carbon footprint than hydrogen made from methods that leave a large carbon footprint.

<sup>14</sup> Fusion power is a form of power generation that would generate electricity by using heat from nuclear fusion reactions, providing a clean and almost limitless source of energy. It is among the most environmentally friendly sources of energy as there are no CO<sub>2</sub> or other harmful atmospheric emissions from the fusion process, which means that fusion does not contribute to greenhouse gas emissions or to global warming.

- **Wide public support for the energy transition is key to the success of the process.** Well documented narratives that compare the benefits of renewable energy with the disadvantages of fossil fuels pave the way for a “**politically acceptable**” energy transition.
- **Carbon pricing** is intended to increase the prices of goods across the economy in proportion to their carbon footprint, and thus in proportion to their negative effect on climate change. As such, it is an **effective tool to foster the purchase of less carbon-intensive goods.**
- **The European Union (EU) is aiming to be a forerunner of the energy transition.** The EU is working on the revision of its climate, energy, and transport-related legislation under the so-called '*Fit for 55 Package*' to align current laws with the 2030 and 2050 ambitions. Meeting net-zero by 2050, as per the **European Green Deal**<sup>15</sup> goals, will require gas to be decarbonized. Member States will have to adopt different pathways to do so<sup>16</sup>. While Europe has a well-developed gas infrastructure to accommodate increased import requirements in the 2020s, it will require adaptation to transport decarbonised gases post 2030. Timely repurposing of natural gas networks and new construction will be crucial to match both the demand for and supply of hydrogen.<sup>17</sup>

## IMPLICATIONS

- It is anticipated that by **scaling up renewables, low-carbon hydrogen, and energy efficiency** that dangerous greenhouse gas emissions will be cut, dependency on fossil fuel imports reduced and, accordingly, market volatility too.
- **International energy is both an instrument and an arena for power politics.** The energy transition will have important geopolitical effects such as changing the role, position, and power of several States. Therefore, it requires new governance schemes to manage and shape interconnectivity while maintaining stable relations with traditional fossil fuel producers and transits to jointly decarbonize existing energy supplies and value chains.
- The transition to clean energy sources bears the potential to **alleviate energy dependency on foreign producers** and, by diversifying energy sources and making them more broadly accessible and affordable, **minimise related geopolitical tensions.**
- The **clean energy transition also carries direct security implications.** For instance, fossil fuel infrastructure has commonly been targeted by terrorist groups to threaten regional security<sup>18</sup>. The diversification of energy sources provided by the clean energy revolution may reduce the negative impact of terrorists on major, critical infrastructures and, hence, their ability to disrupt the economy. Similarly, it may reduce the operational space of so-called “eco-terrorists”.

---

<sup>15</sup> The European Green Deal is a set of policy initiatives by the European Commission with the overarching aim of making the European Union climate neutral in 2050. The European gas demand will likely remain stable up to 2030, followed by a sharp decline to meet net-zero by 2050 per the European Green Deal goals.

<sup>16</sup> Currently, gaseous fuels used in the European Union are dominated by natural gas, a fuel of fossil origin. Natural gas is composed mostly of methane and is consequently associated with greenhouse gas emissions of carbon dioxide when the natural gas is used as fuel or as methane and when the natural gas is produced, processed, transported, and used. Decarbonisation of gas can be achieved in different ways and means. In other words, decarbonisation entails different ways by which the greenhouse gas emissions associated with the life cycle of natural gas from its source to the end-user can be avoided, eradicated, or mitigated.

<sup>17</sup> One way to decarbonise is to replace natural gas with a sustainably produced non-methane one. Hydrogen produced via water electrolysis with the help of electricity from renewable resources is an example.

<sup>18</sup> Allegedly, in the Middle East, pipelines carrying oil and gas have been subject to sabotage repeatedly.

- The **clean energy transition will bring deep structural changes to societies and economies**. The socio-economic impacts of the energy transition will not be the same for everyone and increased uncertainty, discrepancy and fragmentation will emerge as multiple transitions take place across the globe. There is general consensus that while there are initial costs associated with the transition, they would lead to significant savings in the long run. The transition towards clean energy requires equipment, technologies, and various services, thereby offering significant employment and opportunity for technological breakthroughs worldwide.
- If managed properly, the **transition could provide remarkable opportunities for States' economies**. Good governance, economic diversification, social dialogue, and social protection, availability of transition funds, as well as skills development, are important aspects of an **equitable energy transition**.
- Finally, **reducing dangerous emissions will slow down environmental degradation and pollution, which are negatively impacting public health**. There is an existing relationship between altered environmental conditions and human health. Drivers of global environmental change (e.g. land-use change, resource scarcity, or climate change) pose direct health risks and may impair ecosystem services that subsequently influence public health.<sup>19</sup>

## KEY RECOMMENDATIONS

- Against the backdrop of serious climate and environmental degradation, **all OSCE participating States should cut their greenhouse gas emissions** in line with the COP26 Glasgow Conclusions. The **clean energy transition offers a golden opportunity to do so**, while also being instrumental to **green recovery from COVID-19, in socio-economic progress, and in enhanced co-operation** across the board.
- **The hybrid decarbonization model**, including renewable and low-carbon hydrogen, **should be at the core of the energy transition**. Accordingly, it should be **supported through increased public and private investments**.
- As the energy transition gains space, a certain degree of volatility can be expected to increase. **Developing ambitious policy, financial and contractual measures will be vital** for a less rutted and more successful transition.
- It is paramount to **involve all relevant stakeholders in addressing** energy transition related challenges, including the **public sector, the private sector, consumers, producers, and industries**.
- **Citizens' needs and considerations should be put at the core of the energy transition effort**. A transition that fails to do so is doomed to fail. It is necessary to further **ensure the fairness of the transition** towards a climate-neutral economy, thereby **leaving no one behind**. The **socio-economic impact of the transition should be alleviated through financial mechanisms and suitable policies**.
- The **energy transition should be based on transparency, collaboration, as well as common trust on joint projects and pathways**. If public support and general consensus on the green energy transitions erodes, developing a clean, diversified, secure and affordable energy system will become more complicated.
- Against this backdrop, citizens' understanding of the energy transition is critical. **Public awareness should be raised, in particular by politicians**, to ensure that the energy transition is widely understood by everyone as being collectively beneficial.

---

<sup>19</sup> Highlight from the Parliamentary Web Dialogue "Framing the Environmental Security – Public Health Nexus" held on 25 May 2021.

- **The private sector’s role in the transition should be promoted. Citizens’ roles as producers of renewable energy should also be strengthened** by empowering them to generate, store, self-consume, and sell electricity at the individual and community levels. **Trade associations should be further engaged in the establishment of acceptable carbon prices<sup>20</sup>.**
- Science and technology play a central role in the energy transition. **The energy transition should leverage on the latest scientific findings and technological developments** aimed at, *inter alia*, improving energy efficiency, reducing energy costs, developing and making economically viable new sources of clean energy, and capturing existing emissions. In this context, the development of **low-carbon hydrogen and nuclear fusion should remain a priority.**
- To the greatest extent possible, **energy issues should be depoliticized and should not be used as an instrument to influence national and foreign dynamics. All sorts of energy-related confrontations should be avoided** to reduce geopolitical effects and potential escalations that would directly impact the citizens. In this regard, emphasis should be placed upon the diversification of energy sources to lessen the reliance on the energy sources of individual countries or regions.
- **Dialogue on energy security** across the OSCE region **should be further strengthened** at this critical juncture. In particular, **international organizations shall strive to maintain an open and fact-based dialogue** to depoliticize energy issues, foster climate diplomacy, and address upcoming threats.
- **Parliaments must be in the driver’s seat when it comes to the energy transition**, as they have the ability to **influence/make significant political decisions.** Both the speed and depth of the energy transition will be shaped by their decisions. Against this background, **Parliaments have the critical role of taking into account citizens’ considerations in the process**, as well as ensuring their support, inclusivity and representation. For instance, they should ensure that costs and benefits are distributed evenly throughout society and that no one is left behind.

---

<sup>20</sup> Greenhouse gas emissions impose costs on the global community due to the environmental and public health hazards generated. A carbon price shifts the burden of these costs from society as a whole onto the entities responsible for the emissions, providing an incentive to decrease carbon emissions.