Energy storage research and development ukraine

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Let us invite you to the online panel discussion <<Battery Energy Storage Systems (BESS) in the Ukrainian Power System. Current state and development potential>>, which will be held by the UN Global Compact Ukraine in cooperation with ExPro as part of the Ukraine Energy Initiative.

The event will gather experts from NPC Ukrenergo, DTEK, MHP Eko Energy, KNESS, Huawei Ukraine, and others and will be moderated by Vitaliy Opryshko, Head of the Ukrainian Energy Initiative, and Daria Orlova, Editor of ExPro Electricity.

The purpose of the discussion is to jointly form a vision of the strategy for the development of Battery Energy Storage Systems in Ukraine and give this sector a boost.

The systemic shock from Russia"s 2022 invasion of Ukraine created a radical discontinuity, disrupting structural conditions underlying the nation"s decarbonization ambitions. Ukraine"s commitment to sustainable transition was firmly established pre-war, with policies targeting substantial emissions cuts. However, this progress now faces severe reversal amidst humanitarian crises, infrastructure destruction, and economic collapse.

Rebuilding after such an immense systemic disruption provides potential tipping points to fundamentally transform Ukraine"s legacy fossil fuel dependence. Strategic integration of climate considerations during recovery can steer structural changes towards resilience and sustainability.

This chapter examines Ukraine"s pre-invasion decarbonization goals and progress. We assess the shock"s disruptive impacts across the energy system and economy. Finally, we explore leveraging prospective tipping points during reconstruction to balance immediate needs with catalyzing green transformation aligned with global climate objectives.

Opportunities exist amidst the challenges to develop a new energy system that addresses urgent humanitarian and infrastructure priorities while accelerating Ukraine"s stalled decarbonization. Realizing this will require seizing potential windows for non-linear change during the rebuilding process. Our study intends to provide recommendations on navigating trade-offs and actualizing tipping points to emerge from crisis with enhanced sustainability and self-reliance.

A growing body of research examines how systemic shocks can catalyze sustainability tipping points when harnessed strategically. Lenton et al. (2022) synthesize theory and examples to provide guidelines on creating conditions to enable positive tipping points across socio-technical-ecological systems. Multiple potential interventions and actors can contribute to triggering them.

Literature on social tipping dynamics elucidates how small perturbations unlock rapid change by overcoming incumbent interests (Otto et al., 2020). This highlights the need for socio-political perspectives when considering nonlinear transformations.

Besides, some researchers (T?bara et al., 2021) underline that embracing transformative change towards green transformations may entail adopting more diversified, self-defined complex forms of collective sense-making processes based on project identities. Such tipping points overlap well with the peculiarities of Ukrainian regional development.

Work on transformative climate science indicates conventional assessment methods have limitations in spurring systemic shifts. Instead, solutions-oriented processes that link adaptation, mitigation and development are required (T?bara et al., 2019). This demands new interfaces supporting societal engagement and ownership.

The green economy discourse envisions transformations towards sustainability underpinned by policy, finance, technology, and governance innovations (Dogaru, 2021). However, equitable distributional aspects remain paramount.