Ukraine energy storage policy updates

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This new assistance is in addition to $55 million in emergency energy sector support for generators and other equipment to help restore emergency power and heat to local municipalities impacted by Russia"s attacks on Ukraine"s power system. We will continue to identify additional support with allies and partners, and we are also helping to devise long-term solutions for grid restoration and repair, along with our assistance for Ukraine"s effort to advance the energy transition and build an energy system decoupled from Russian energy.

Since Russia"s further invasion on February 24, working together with Congress, the Administration has provided nearly $32 billion in assistance to Ukraine, including $145 million to help repair, maintain, and strengthen Ukraine"s power sector in the face of continued attacks. We also have provided assistance in areas such as EU integration and regional electricity trade, natural gas sector support to maximize resource development, support for nuclear safety and security, and humanitarian relief efforts to help Ukrainians to overcome the impacts of energy shortages.

For the second consecutive winter, Russia has increased military attacks on Ukraine"s energy system, significantly undermining the security of the country"s power supply. The bombing campaign - which lasted throughout the 2022/23 heating season and resumed in recent months - has targeted a wide range of energy infrastructure, from power plants to oil refineries and district heating facilities. The World Bank recently estimated that Ukraine"s energy sector has sustained USD 12 billion in damages during the war.

In light of Russia"s continued attacks, safeguarding power system resilience and boosting electricity security are key priorities for Ukraine. The International Energy Agency (IEA), which has deepened its relationship with Ukraine since Russia"s invasion, is stepping up to provide support - sharing data and analysis, and working directly with policy makers as they look to both address the country"s immediate energy needs and develop plans for the longer term.

Ukraine made significant efforts to improve energy security ahead of this winter. Over the spring and summer, power utilities - aided by significant grants, loans and investment from a wide range of governments, multilateral donors and the private sector - undertook the biggest energy infrastructure repair and maintenance campaign in the country"s history. The Ukrainian government also strengthened its air defence systems and invested in passive defence measures such as engineering fortifications to further protect energy infrastructure.

Other steps were taken in parallel to help millions of people and businesses in Ukraine reliably keep the lights on and stay warm. Ukraine"s disconnection from Russia"s power system and synchronisation with Continental Europe was made permanent in November 2023, and operators of Continental Europe"s transmission system decided to raise the commercial capacity limit for electricity imports. This will allow Ukrenergo, Ukraine"s transmission system operator, to better absorb shocks to the system, such as further attacks or spikes in consumption driven by colder temperatures.

However, this winter is still set to be extremely challenging. Not all of Ukraine"s energy facilities could be fully restored by the start of the 2023/24 heating season - especially given difficulties securing financing to repair coal-based generation and sourcing high-power autotransformers, a critical component of Ukraine"s Soviet-legacy power system. Meanwhile, new strikes are causing fresh damage. A long-lasting cold snap would also pose risks; milder-than-normal temperatures in 2022/23 significantly helped the country"s efforts to keep power and heating supplied to its citizens

The IEA and many of our member countries are working closely with Ukraine to help the country"s energy system recover from Russia"s attacks and lay the groundwork for its transition to a secure and sustainable energy future.

As part of its workstream on Power System Security, the IEA also led three workshops with Ukrainian stakeholders, including one in Kyiv during an IEA team visit in October. These workshops had a strong focus on distributed energy resources as a route to a more secure and modernised power system based on domestic, renewable resources, in line with Ukraine"s energy priorities.

There are many potential benefits to leveraging distributed energy resources such as rooftop solar PV in Ukraine. With the displacement of people and industry during the war shifting demand patterns, distributed resources - which have a shorter lead-time for deployment than conventional generation - can help meet demand where it is most needed.

Distributed energy resources are not limited to rooftop solar PV, nor indeed to generation. When installed in combination with behind-the-meter battery storage, which allows consumers to store energy and use it later, there is also the potential for customers to have continued access to power following a wider grid outage. In this way, distributed energy resources not only add flexibility and empower consumers, but also lower energy security risks, since these systems are harder to target and will not cause widespread power outages if they are damaged in an attack.

Integrating more distributed energy resources would also help Ukraine meet its ambition to reduce greenhouse gas emissions 65% by 2030 compared with 1990 levels. And they present an opportunity to reduce reliance on a highly centralised Soviet-era power system, with aging infrastructure that needed to be refurbished or replaced even before the war.