

OSCE | MITIGATING CLIMATE CHANGE THREATS TO CRITICAL ENERGY INFRASTRUCTURE

ADVANCING REGIONAL ENERGY SECURITY

Energy Systems Analysis and Capacity Building for Long-term
Regional Energy Security Planning



Energy systems across the OSCE region are increasingly interconnected and exposed to a complex and evolving range of risks. Climate-related hazards can physically damage critical energy infrastructure, impact supply and demand patterns, and threaten energy security. At the same time, rising energy demand, supply chain disruptions, infrastructure constraints, and changing geopolitical and trade dynamics can place additional pressure on energy systems and amplify these risks. This exposure is particularly pronounced in Eastern Europe, South-Eastern Europe, the Mediterranean, and Central Asia ("OSCE Target Regions").

Although awareness of these challenges has grown and considerable technical expertise already exists across the regions, national decision-makers need coordinated analytical capabilities and practical tools to plan long-term energy security and resilient energy transition strategies. The newly established OSCE-IIASA partnership will address this need and support decision-makers in 14 countries across the OSCE Target Regions through advanced energy system modelling and robust analytical tools, combined with capacity-building and regional co-operation.

PROJECT MISSION

Support energy decision-makers across OSCE regions in anticipating and mitigating energy system risks through energy modelling and advanced analytical tools, thereby strengthening energy security and enabling a resilient energy transition.

CENTRAL ASIA:

Kazakhstan, Kyrgyz Republic, Tajikistan,
Turkmenistan, Uzbekistan

EASTERN EUROPE:

Ukraine, Moldova

SOUTH-EASTERN EUROPE:

Albania, Bosnia and Herzegovina, Montenegro,
North Macedonia, Serbia

MEDITERRANEAN PARTNERS FOR CO-OPERATION:

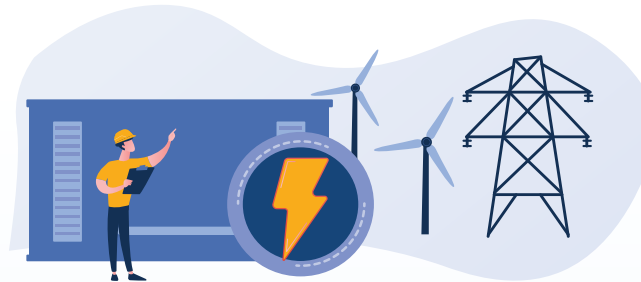
Algeria, Jordan



This project builds on the OSCE's longstanding mandate on energy security (2006-2013) and climate change (2021), adopted by the 57 participating States.

The boundaries and names shown on this map do not imply official endorsement or acceptance by the OSCE or IIASA.

THREE PILLARS OF ACTION



1 Establish a Regional Energy Systems Resilience Analysis Framework

A common and transferable analytical framework for assessing how interconnected energy systems respond to climate-related and broader systemic energy security risks.



Energy system models:

Developing national- and regional-level energy system models that integrate energy, climate, trade, and infrastructure data to explore responses to potential shocks and interacting risks.



Baseline assessment and future scenarios:

Identifying current and emerging energy system vulnerabilities under different future conditions.



Regional energy resilience reports:

Translating modelling findings into evidence-based recommendations for energy security and transition planning.

2 Strengthen Capacities for Long-Term Energy Security Planning

Capacity-building to strengthen the skills, tools, and practical experience needed to apply risk-informed analysis to energy security and transition planning.



Regional assessment missions and workshops:

Co-developing analytical approaches with participating institutions, incorporating national policy priorities, and identifying responses to shared risks.



Training toolkit:

Developing an open-source resource on applying energy systems modelling to energy security planning.



National trainings:

Providing hands-on training for participating institutions to independently use energy modelling tools and apply results to national energy planning.

3 Advance Science-to-Policy Translation, Tools & Regional Co-operation

Effective translation of technical findings into policy-relevant insights, decision-support tools, and strengthened cross-border coordination.



Tailored policy guidance:

Providing clear, actionable recommendations through policy briefs, factsheets, and synthesis reports.



Online Energy Security Platform:

Launching an upgraded, web-based decision-support tool that combines interactive dashboards, visualizations, and newly modelled energy security pathways.



Regional Energy Resilience Expert Network (RE2N):

Establishing a lasting regional network for country-nominated experts to exchange knowledge and sustain energy security co-operation.

AT A GLANCE

OSCE has established a partnership with IIASA to implement Phase II of its project, Mitigating Climate Change Threats to Critical Energy Infrastructure (2023-2028). Phase I (2023-2025) focused on climate risk assessment. Phase II (2026-2028) will broaden the project's scope to systemic risks to energy security across OSCE target regions.

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