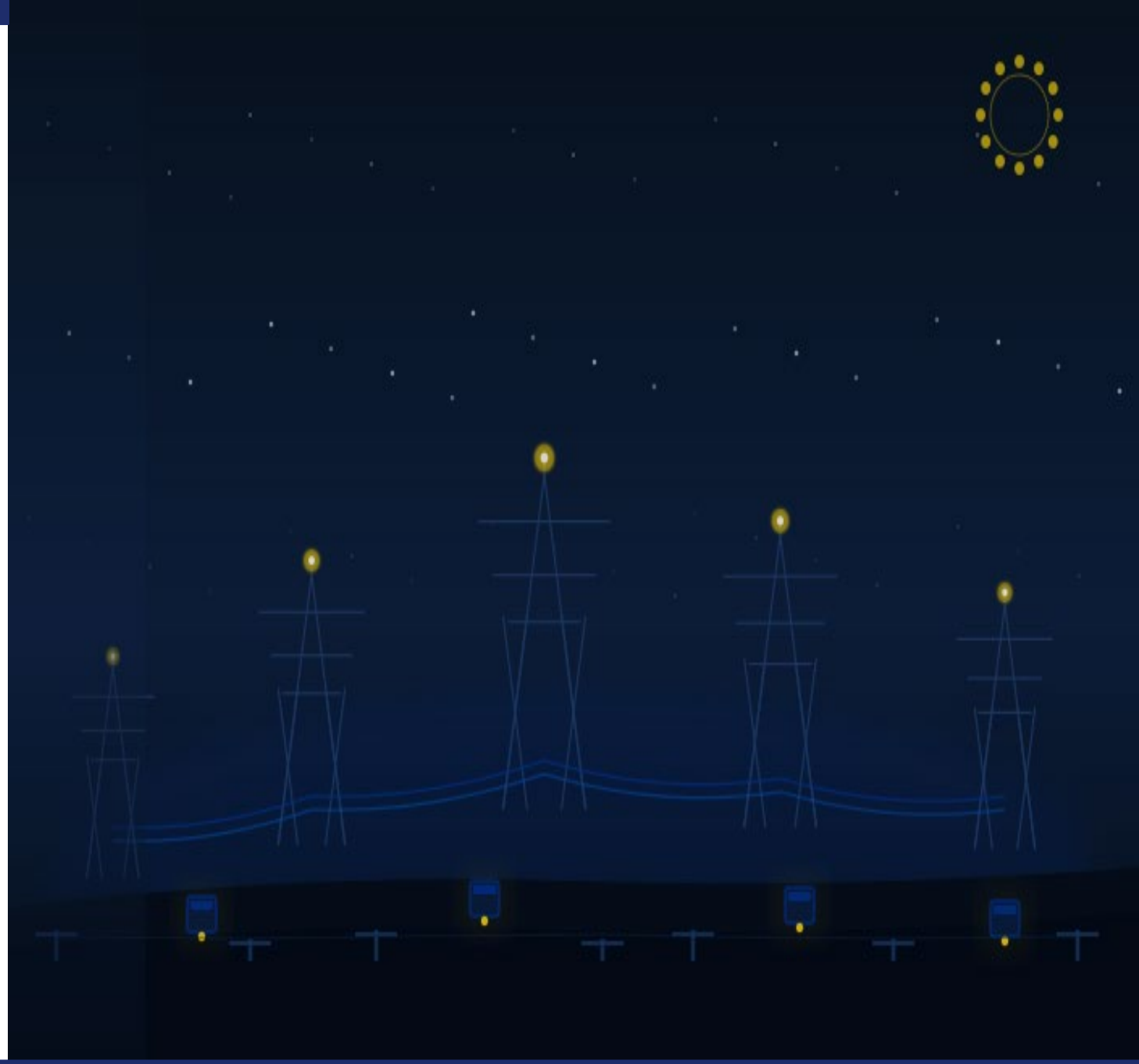
ECDSO-E

Energy Community Distribution System Operators in Electricity

Background, Achievements, Challenges & Future Priorities



PRESENTED BY

Givi Jgarkava

Chair of ECDSO-E

AGENDA

What we'll cover today

1 Background & Establishment

2 Member Countries

3 Objectives & Mandate

4 Governance & Structure

5 Task Forces & Networking Groups

6 Main Areas of Work

7 Achievements

8 Key Challenges Facing DSOs

9 Future Priorities

From Transmission Focus to an Institutionalized DSO Platform

HISTORICAL BACKGROUND

1 2005–2011

Transmission-First Era

Energy Community Treaty (2005) focused regional cooperation on TSOs and wholesale electricity markets.

2 2011–2014

Reform of EU Acquis

Ministerial Council decisions progressively extended EU energy package obligations to distribution operators.

3 2014

DSO Platform Created

First ECDSO-E meeting in Vienna, 12 March 2014, initiating regional DSO coordination.

4 2018

Formal Mandate

MC Decision 2018/11/MC-EnC: regulatory alignment, unbundling, harmonization and cooperation.

ESTABLISHMENT & EVOLUTION

2014

Initial Launch

ECDSO-E platform established. First meeting on 12 March 2014.

2018

Institutionalization

MC Decision 2018/11/MC-EnC anchored ECDSO-E in the Energy Community framework.

2019+

Expansion

Growth of task forces, position papers and active engagement on regulatory priorities.

Countries and their distribution system operators

Albania

- OSHEE

Bosnia & Hz.

- MP MH ERS
- EPHZHB

Georgia

- Energo-Pro Georgia

Kosovo*

- KEDS

Moldova

- Premier Energy

Montenegro

- CEDIS

North Macedonia

- Elektrodistribucija (EVN)

Serbia

- EPS Distribucija

Ukraine

- DTEK Grid
- DSO Association UA

Regional Reach

~64M

Population

12+

Years of Cooperation

What ECDSO-E was created to do

Harmonize

Facilitate uniform implementation of EU electricity directives across all member countries

Compliance

Follow up DSO conformity with obligations; issue official positions when needed

Common Views

Develop shared positions on key issues for presentation to regulators and institutions

Support DSOs

Assist individual DSOs in implementing their tasks and coordinating activities

Transition

Guide DSOs through the energy transition via guidelines, best practices and peer consultation

Liaisons

Maintain active liaison with EU DSO Entity and European cooperation bodies

A coordinated structure for regional DSO cooperation

CORE GOVERNANCE

ECDSO-E Coordination Group

ECS Moderator	Chair	2 Vice-Chairs
Energy Community Secretariat	Elected	Elected

MEMBERS

DSO representatives formally designated by their respective DSOs — the primary constituency of ECDSO-E.

TASK FORCES

4 Task Forces: Energy Transition, Smart Grids, Network Planning, Network Tariffs.

TECHNICAL NETWORKS

2 Technical Networks: Data Hub, Compliance Officers Network.

EXPERT GROUPS

Ad-hoc groups producing studies, position papers and technical guidance.

Where focused technical work happens

TASK FORCES (TF)

TF · Energy Transition

Decarbonization pathways, distributed flexibility, prosumer integration, sector coupling.

TF · Smart Grids

Smart metering, digital customer services, interoperability and data platforms.

TF · Network Planning

Grid development planning, hosting capacity assessment and infrastructure investment.

TF · Network Tariffs

Tariff design, cost allocation and network cost recovery methodologies.

TECHNICAL NETWORKS (TN)

TN · Data Hub

Data platform architecture, interoperability standards, data management and governance frameworks.

TN · Compliance Officers Network

Unbundling oversight, compliance practice sharing and regulatory implementation support.

Selected outputs shaping DSO practice across the Energy Community

GUIDELINES & TOOLBOXES

- Guidelines and toolbox for DSO unbundling
- Policy Guidelines 01/2018 — Grid integration of prosumers (self-consumption)
- Policy Guidelines 02/2018 — Distribution network tariffs

POSITION PAPERS

- Position paper on connection costs
- Network security and risk preparedness (within OSCE Handbook)
- Position Paper on Quality of Supply

TECHNICAL WORK

- Technical assistance — functional unbundling: monitoring and reporting
- Technical assistance — network code implementation in the Energy Community
- Study on flexibility options to support decarbonization in the Energy Community

Pressures defining the DSO agenda

Renewable Integration

- Rooftop solar causes reverse power flows and voltage violations at low-voltage level
- Variable PV/wind output drives local congestion and unpredictable load profiles
- Balancing complexity grows as cloud-driven fluctuations require near-real-time response

Energy Crisis Pressures

- Electricity-loss costs spiked 4–5× in 2022
- Regulated tariffs could not recover actual costs; cash flow and investment severely hit
- Heating load shift to electricity further strained network capacity and DSO finances

Digitalization & Cybersecurity

- Smart meter rollouts expand attack surface — millions of connected endpoints per DSO
- Cyber attacks on energy infrastructure elevated threat assessments region-wide
- Data hub buildout and interoperability mandates require new ICT architectures and governance

Regulatory & Investment

- Regulatory frameworks designed for passive grids lag active grid management needs
- Significant capex required: grid reinforcement, digitalization, EV charging integration
- Climate adaptation — extreme weather resilience — adds investment pressure beyond market reform

Priorities for the next horizon

Merging ECDSO-E's operational focus with the EU DSO Entity strategic framework.

1 

Renewable Integration & Grid Balancing

Solar/wind connection, reverse power flow management, voltage stability and frequency balancing.

2 

Grid Infrastructure Investment

Reinforcement, modernization and climate resilience — prerequisite for all other priorities.

3 

Smart Metering & Digitalization

Smart meter deployment, Smart Grid Indicators, data-driven operations and digital platforms.

4 

Flexibility Markets & Data

Distributed flexibility frameworks, demand response, data hub interoperability and governance.

5 

Cybersecurity & Resilience

Cyber-physical risk frameworks, incident response — aligned with EU DSO Entity EG Cybersecurity.

6 

DSO–TSO System Coordination

Operational interfaces, joint network planning, hosting capacity, system of systems approach.

ECDSO-E will continue to support members through the energy transition.

Thank You

For your attention

KEY TAKEAWAYS

1	**Central Actors**	DSOs moving to centre of the energy transition
2	**Regional Platform**	ECDSO-E aligns practices and advances common positions
3	**Shared Future**	Solar/wind integration, balancing and digitalization ahead