

### Energy Market Information Operator (OIRE) and Central Energy Market Information System (CSIRE)

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# 01

## OIRE and CSIRE



## The main legal acts concerning OIRE

The concept of OIRE implementation and the basic functionalities of CSIRE were developed, among others, on the following legal acts basis:

### **1. POLISH LAW**

- ⊖ Energy Law Act (Dz. U. z 2022 y. pos. 1385 a.a.) along with executive acts:
  - ⊖ Regulation of the Minister of Climate and Environment on the Energy Market Processes (Dz. U. 2022 y. pos. 234),
  - ⊖ Regulation of the Minister of Climate and Environment on the Metering System (Dz. U. 2022 y. pos. 788),
  - Regulation of the Minister od Economy on the on the detailed conditions for the operation of the power system (Dz.U. 2007 y. nr 93 pos. 623 a.a.),
  - Regulation of the Minister of Climate and Environment on the detailed rules for shaping and calculating tariffs and settlements in electricity supply (Dz. U. 2022 y. pos. 2505);
- ⊖ Act of 20 May 2021 amending the Energy Law Act and certain other acts (Dz. U.2021 y. pos. 1093 a.a.)
- The Act on Electromobility and Alternative Fuels (Dz. U. 2022 y. pos. 1083 a.a.);
- ⊖ The Act on Trust Services and Electronic Identification (Dz. U. 2021 y. pos. 1797);
- ⊖ The Act on the National Cybersecurity System (Dz. U. 2020 y. pos. 1369 a.a.)

### 2. POLISH REGULATIONS

Regulation of the Council of Ministers on the National Interoperability Framework, minimum requirements for public registers and the exchange of information in electronic form and minimum requirements for ICT systems (Dz. U. 2017 y. pos. 2247)

## The main legal acts concerning OIRE

### **3. EUROPEAN UNION DIRECTIVES**

O DIRECTIVE (EU) 2019/944 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158/125 14.06.2019).

#### 4. EUROPEAN UNION REGULATIONS

- OMMISSION REGULATION (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (OJ L 197/24 25.07.2015).
- REGULATION (EU) No 910/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC (OJ L 257/73 28.08.2014).
- REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119/1 04.05.2016).

### **5. OTHER DOCUMENTS**

⊖ COMMISSION RECOMMENDATION (EU) 2019/553 of 3 April 2019 on cybersecurity in the electricity sector (OJ L 96/5 05.04.2019).

## **OIRE vs CSIRE**



### According to the Energy Law Act :

**PSE** has been mandated to create **OIRE** and implement **CSIRE**.

#### **Energy Market Information Operator (OIRE)**

an entity responsible for the management, administration and processing of information collected in CSIRE for the purposes of implementing electricity market processes.

#### Central Energy Market Information System (CSIRE)

an ICT system for processing and exchanging electricity market information for the purposes of implementing electricity market processes.



### Key tasks of OIRE



- ⊖ Management and administration of CSIRE
- Processing (including collecting and exchanging) of electricity market information – incl. electricity metering data
- ⊖ Ensuring access to the collected information for eligible CSIRE users.

### CSIRE – benefits for end users, including prosumers

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- ⊖ Easy and free of charge access to electricity market information (including metering data).
- → Facilitating and shortening the implementation time of electricity market processes (among others of the change of supplier).
- ⊖ Possibility to verify individual consumption or amount of electricity fed into the grid.
- Or Possibility of sharing one's own electricity market information, including metering data, with chosen entities (e.g. in order to obtain better electricity sales offers or purchase new services).
- ⊖ Ensuring information security and protection of personal data in accordance with European Union law requirements.

### CSIRE – benefits for market



- Reducing the costs of the electricity market operation and lowering market entry barriers by reducing the number of interfaces and creating a single point of contact (POC) to unified data.
- ⊖ Effective and safe retail electricity market information exchange, which fullfills the statutory rights and obligations of market participants.
- → Standardization of the retail electricity market processes rules and clear provision
   of responsibilities.
- ⊖ Guarantee of data processing efficiency and durability of the CSIRE solution.
- ⊖ Enabling the development of new services by facilitating access to electricity market information, including electricity consumption and production profiles.
- ⊖ Transparency of the retail electricity market processes supported by CSIRE.



### CSIRE – benefits for the PPS and DSOs



- → The possibility of using a uniform standard of aggregated metering data to meet statutory obligations.

CSIRE will also provide access to selected aggregated data for the development of new services, conducting analytical and research works, and information studies.

## 02

# Selected information about the operation of OIRE and CSIRE



# Models of information exchange between electricity market participants







# Model of metering data flow in architecture with OIRE and CSIRE



- → The Act of 20 May 2021 amending the Energy Law Act and certain other acts obliges DSOs to install smart energy meters.
- Or Metering data will be collected from smart metres by DSOs and TSO and then transferred to CSIRE.
- OSIRE will store and provide metering data to authorized entities (including electricity suppliers).
- ⊖ Electricity consumers will have access to their data via a dedicated online user portal provided by OIRE.
- Only authorized entities will be able to send commands to smart meters (e.g. enable prepayment mode) via CSIRE.



### CSIRE – the scope of data processing

- ⊖ Characteristics of metering point (and energy consumption point) data included:
  - ⊖ Grid user information (incl. information about consumer) assigned to a particular metering point
  - ⊖ technical data concerning the metering point
  - ⊖ commercial data and contracts related to the metering point
  - ⊖ other characteristics of metering point data indispensable for energy market processes.
- ⊖ Electricity metering data, including daily electricity input and output profiles.
- ⊖ Metering data concerning electricity quality with related metrics.
- Onfiguration data for the retail energy market, including data on entities participating in the market and their corresponding contractual relationships.
- Data and information regarding messages sent and shared by CSIRE, including commands sent via CSIRE to smart meters.
- ⊖ Statistics on the CSIRE activity and the retail energy market.



### **Overview CSIRE system architecture**



Selected information about the operation of OIRE and CSIRE

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## Communication with CSIRE

Communication with CSIRE, including data feed and acquisition, will take place via:



### → API (Application Programming Interface)

OSIRE is an integration platform that facilitates connecting and exchanging electricity market data between various IT systems used by market participants.

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- → Grid User Portal intended for Polish national power system users, in particular end users, including prosumers, producers, and energy storage operators.
- Professional User Portal intended for market participants, in particular suppliers.
- Public Portal intended for anonymous users, the portal will share generally available information.
- Institutional Portal enabling reporting to public administration offices (e.g. Energy Regulatory Office, Ministry responsible for energy), accordingly to access rights.



## Security requirements for OIRE and CSIRE

Security requirements for OIRE and CSIRE are designed in line with the applicable international security standards and the latest guidelines in this area, including Commission Recommendation 2019/553 of 3 April 2019 on cybersecurity in the energy sector (OJ L 96/50, 5.4.2019).



PSE, as the Transmission System Operator, is obliged to apply the provisions of national law in the following scope:

The Energy Law Act obliges PSE as the Energy Market Information Operator (OIRE) to protect energy market data against activities threatening confidentiality, integrity, availability, and authenticity of the processed data (Article 11zd paragraph 1)

The Act on the National Cybersecurity System requires PSE, as the operator of the critical service of electricity transmission, to implement an information security management system. In this regard, PSE has been certified to PN-EN ISO/IEC 27001:2017-06 standard.



## Security management of OIRE and CSIRE

In order to ensure the security of OIRE, CSIRE will apply to this system the requirements for the information system supporting the critical service. These are defined by the Act on the National Cybersecurity System of 5 July 2018 (hereinafter UKSC) (Dz.U. 2018 poz. 1560), provided for in this Act and in the executive regulations to this Act.



In order to properly implement the critical service operator's tasks resulting from the UKSC, PSE updated the Information Security Management System (ISMS), consisting of a set of policies and standards, including:

- ⊖ Information Security Management Policy
- ⊖ Information Security Procedures

In order to ensure adequate security of IT systems, PSE launched competence centres to provide ongoing incident handling:

- ⊖ CERT computer emergency response team
- SOC security operation centre working 24/7

In order to ensure the highest quality of information security process management, PSE confirmed the compliance of the ISMS with the PN-EN ISO /IEC 27001:2017-06 standard by achieving Certificate No. I-8/6/2022.



## Fulfilment of GDPR requirements in CSIRE

Processing of personal data in CSIRE will meet the requirements set out in Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (hereinafter GDPR)





- → PSE developed and implemented procedures dedicated to personal data protection as part of the Information Security Management System (ISMS).
- → PSE appointed a Data Protection Officer (DPO) and established the Personal Data Protection Section, which supports DPO activity.
- Ouring the development of CSIRE, the GDPR requirements are applied, in particular in regard to the principle of privacy by design and privacy by default, ensuring the security of personal data processing based on international standards, ensuring individual rights for those whose data will be processed (e.g., the right of access, the right to a copy of data).
- ⊖ The system provider will have to meet the GDPR and ISO 27001 requirements.

These measures ensure that the processing of personal data in CSIRE will be safe and secure, and the rights of persons whose data will be stored in the system will be respected.



## IRIESP-OIRE (Instruction of Transmission System Operation and Maintenance – Energy Market Information Operator – Polish TSO Network Code)

The document that describes the operation of the OIRE is the Instruction of Transmission System Operation and Maintenance -Method of operation of the Central Energy Market Information System and cooperation of the Electricity Transmission System Operator, acting as the Energy Market Information Operator, with the electricity system Users and other entities obliged or entitled to use the Central Energy Market Information System (IRiESP-OIRE).





### Information Exchange Standards

- ⊖ Information Exchange Standards determines:
  - ⊖ Business assumptions for energy market processes
  - अ Types of metering points and metering objects

  - Obscription of validation mechanism
  - O Description of energy market processes:
    - ⊖ Goals of processes
    - ⊖ Relationship between processes

    - ⊖ Responsibilities of entities participating in specific processes
- ⊖ Information Exchange Standards are part of IRiESP-OIRE and are the subject of approval by Energy Regulator



### Foundations for establishing IES

### The scope and form of CSIRE Information Exchange Standards depend, in particular on:



- ⊖ Energy Law Act and projects of regulations related to this Act,
- Orgonomic decisions made within the working groups established by PSE and concisting of key Energy market entities, e.g. URE, MKiŚ (the Ministry of Climate and Environment), PTPiREE (Polish Power Transmission and Distribution Association), TOE (The Association of Energy Trading), KIGEiT (Polish Chamber of Commerce for Electronics and Telecommunications), OSDnEE (Polish Association of Independent Energy Suppliers), GUM (Central Office of Measures)
- → public consultation of IRiESP-OIRE (incl. IES) and approval process by the President of Energy Regulatory Office (URE),
- ⊖ ebIX® a standard developed by the European Forum for Energy Business Information eXchange\*,
- ⊖ solutions developed in two similar European projects led by Elhub (Norway) and FinGrid (Finland),

\*\* Based on the Decision of the Minister of Climate and Environment of 29 March 2021 on the appointment of the Smart Metering Implementation Team (link)



<sup>\*</sup> https://www.ebix.org/

### Energy market processes according to IES



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# 03

## Key data







**OIRE** Operator Informacji Rynku Energii

### **1.07.2025** CSIRE launch date







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