



The Quality Of Supply as a Part of the National Report

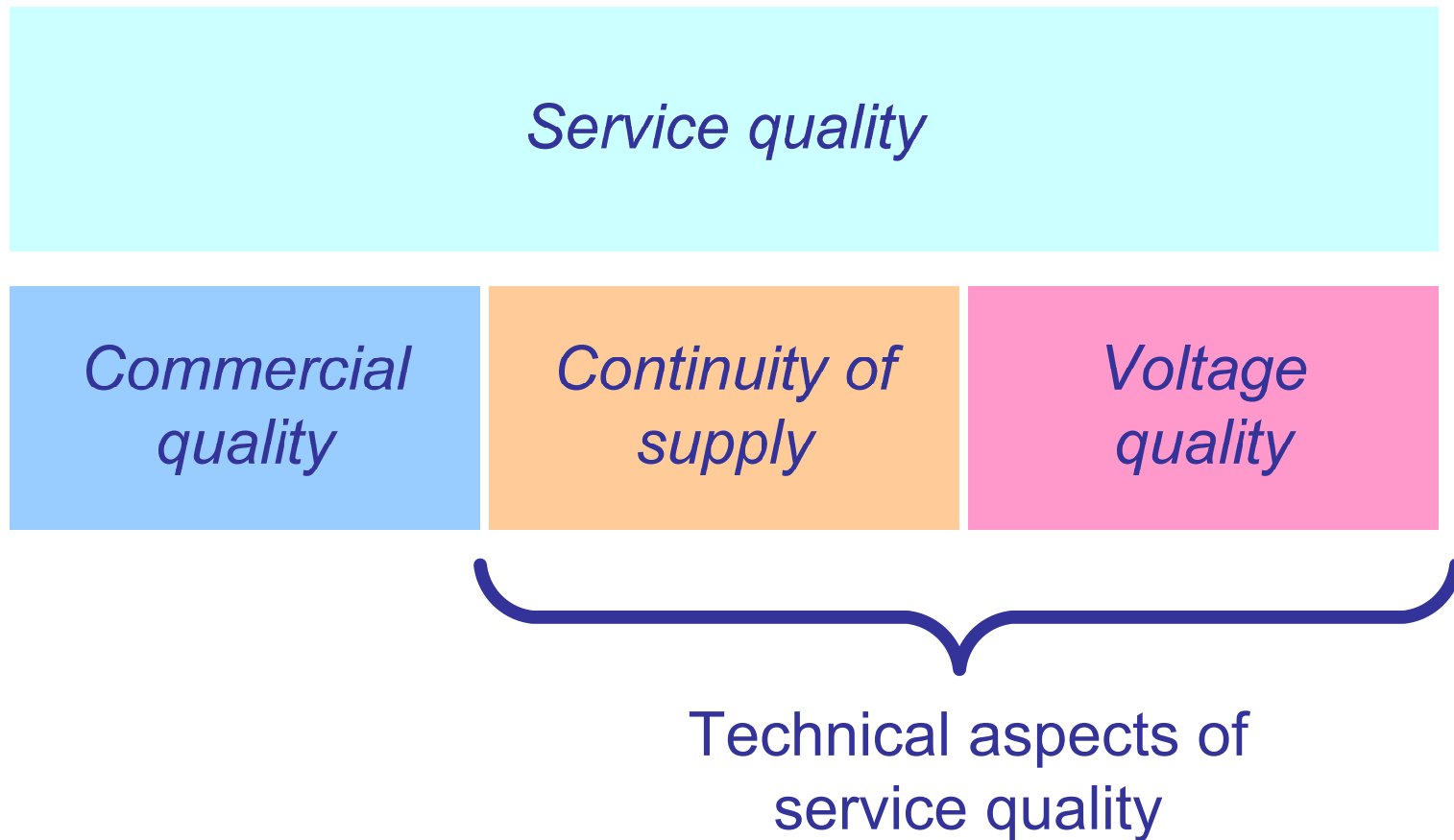
Croatian Energy Regulatory Agency

The 2nd Workshop on the Quality of Service Regulation in the Energy Community

Vienna, 11- 12 May 2010

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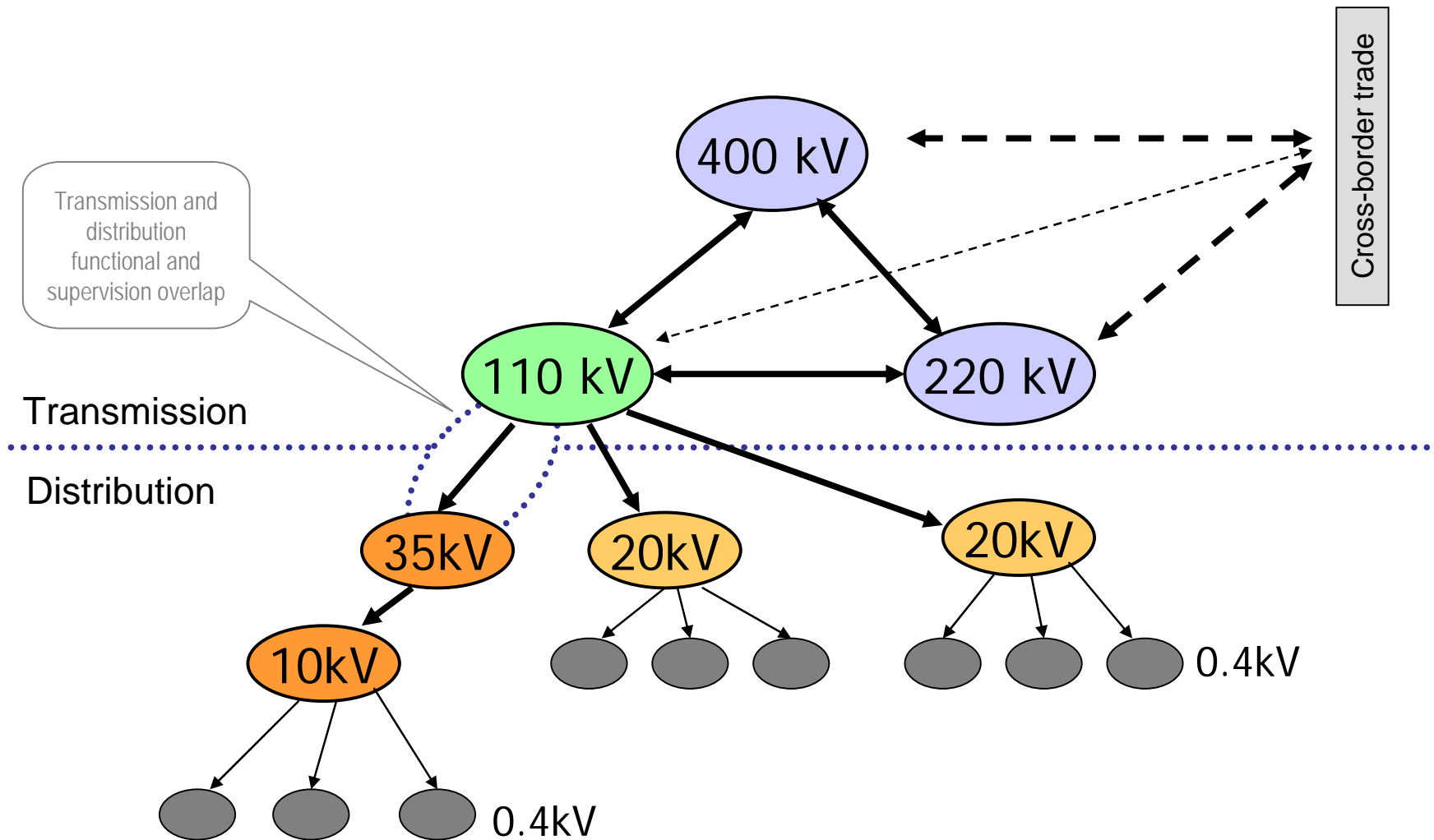
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HEP- ODS as Distribution System Operator



Principal configuration of the electric power system in Croatia



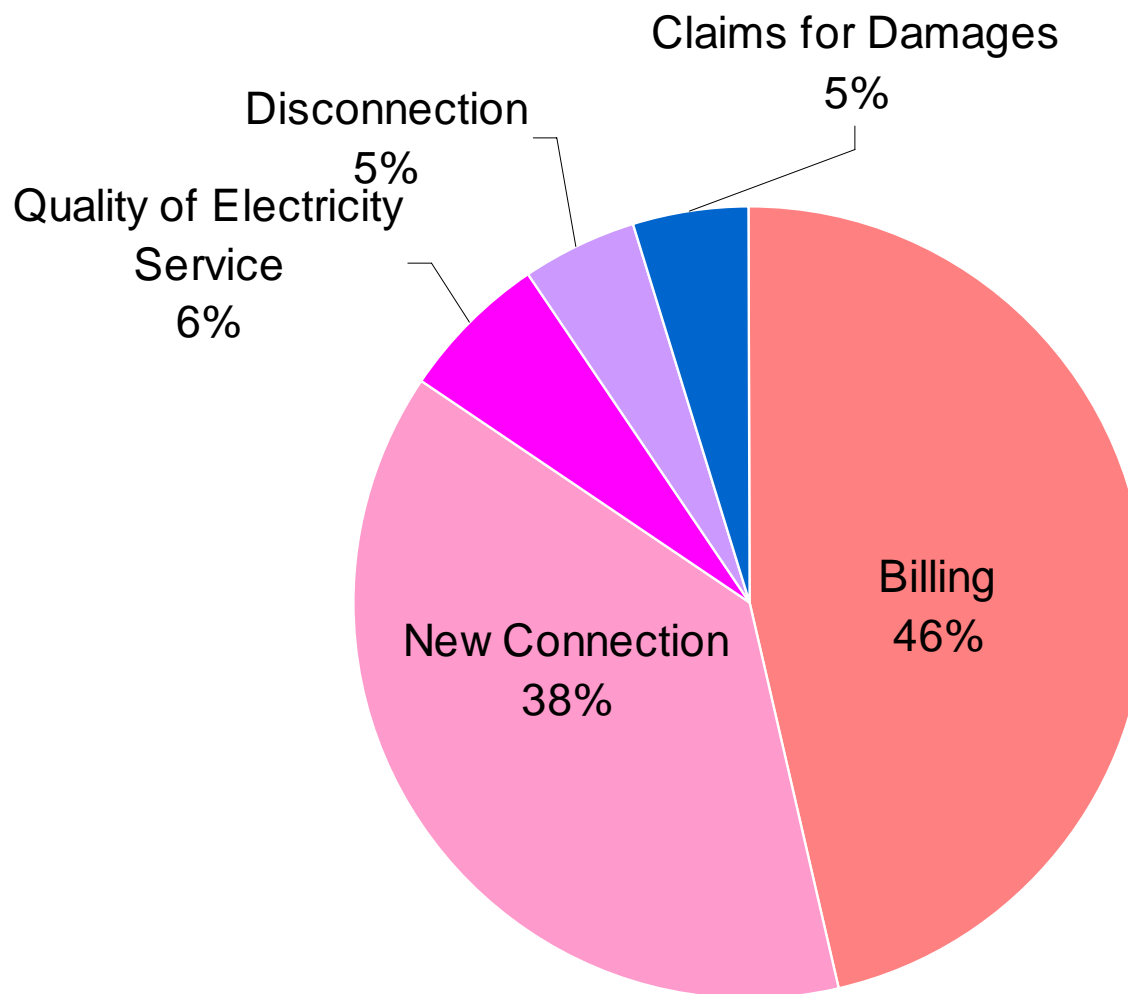
HEP-ODS Basic Consumption Data

Consumption category	Measuring points	Sales MWh	Sales per measuring points kWh	Share %
HV - 110 kV	29	978,600	33,744,828	6
MV - 35 kV	74	426,263	5,760,311	3
MV - 10(20) kV	1.905	3,066,416	1,609,667	19
Total MV	1,979	3,492,679	1,764,871	22
Total HV & MV	2,008	4,471,279	2,226,733	28
LV-commercial (blue)	52,328	331,300	6,331	2
LV-commercial (white)	117,903	1,419,311	12,038	9
LV-commercial (red)	14,647	2,529,296	172,684	16
LV-commercial (orange)		240		0
LV-public lightning (yellow)	20,136	444,277	22,064	3
Total LV - commercial	205,014	4,724,424	23,044	30
LV-household (blue)	789,917	1,817,993	2,301	11
LV-household (white)	1,257,592	4,882,635	3,883	31
LV-household (orange)		154		0
LV-household (black)	3,139	11,146	3,551	0
Total LV - household	2,050,648	6,711,928	3,273	42
Total LV	2,255,662	11,436,352	5,070	72
Total	2,257,670	15,907,631		100

Data Sources

- ❑ The DSO has established:
 - ❑ A system for collecting, processing and storing the data on the continuity of supply (1 January 2007)
 - ❑ Monitoring of voltage quality (1 January 2007)
 - ❑ Monitoring of quality of services (1 January 2006)
- ❑ HERA has established a database of customer complaints (1 January 2006)

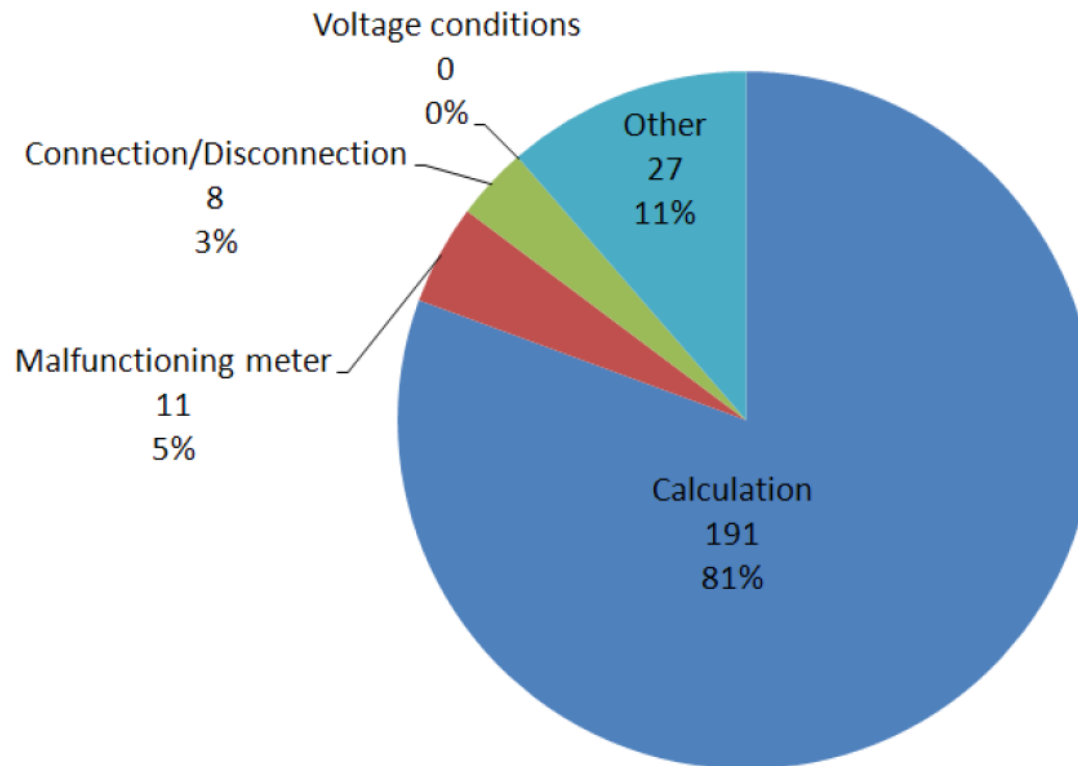
Customers' complaints in HERA in 2008



Customer Complaint Commission of HEP-ODS in 2009



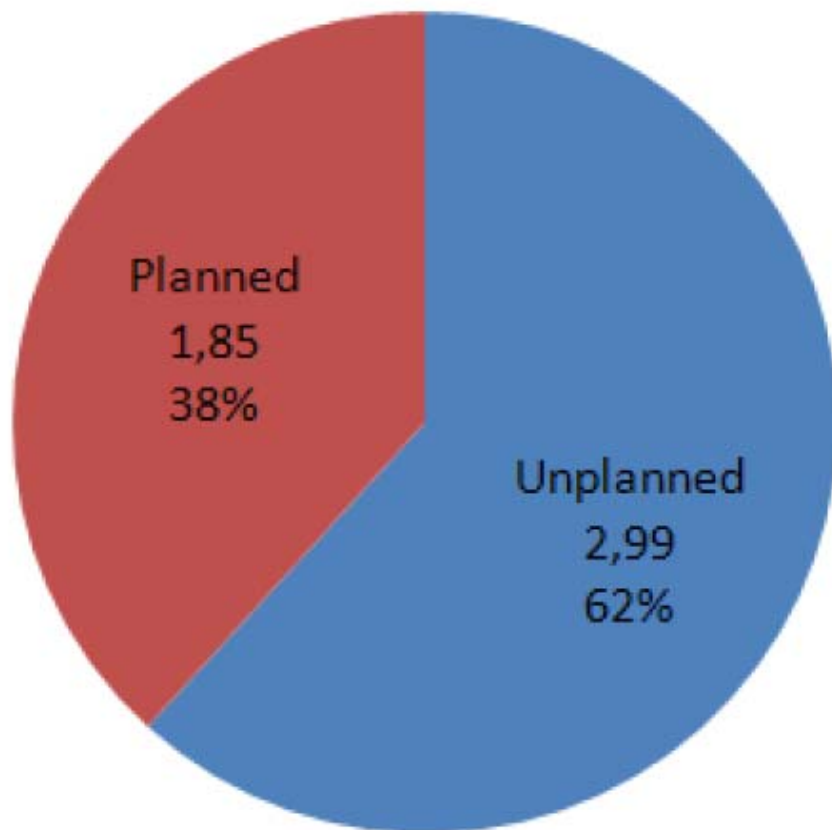
Meetings held	Total complaints	Total accepted	Total rejected
56	236	71 (30%)	165 (70%)



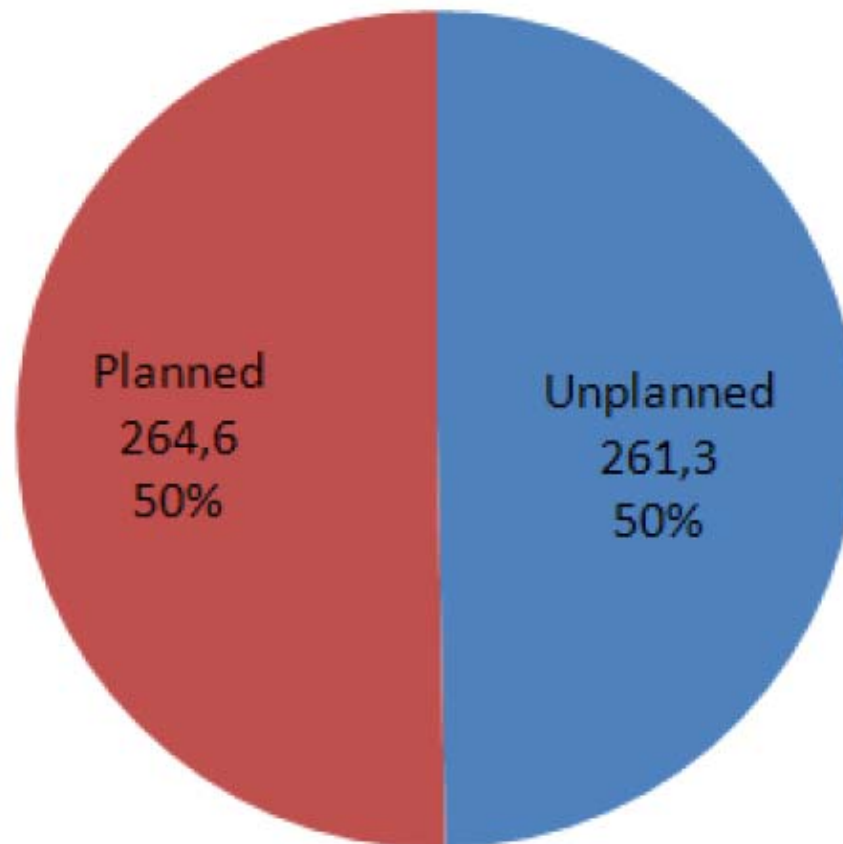
SAIFI & SAIDI on the DSO's Level in 2009



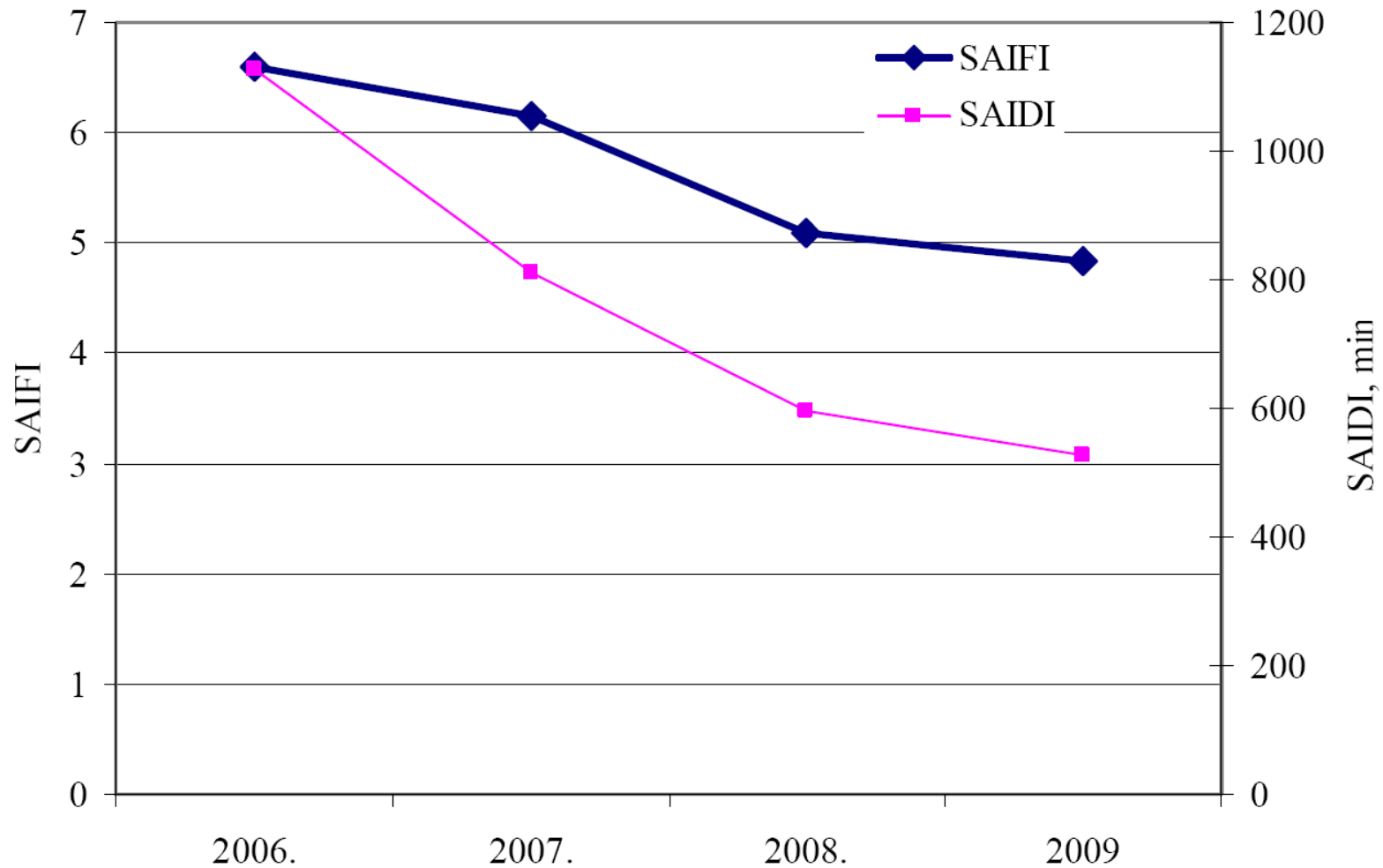
SAIFI



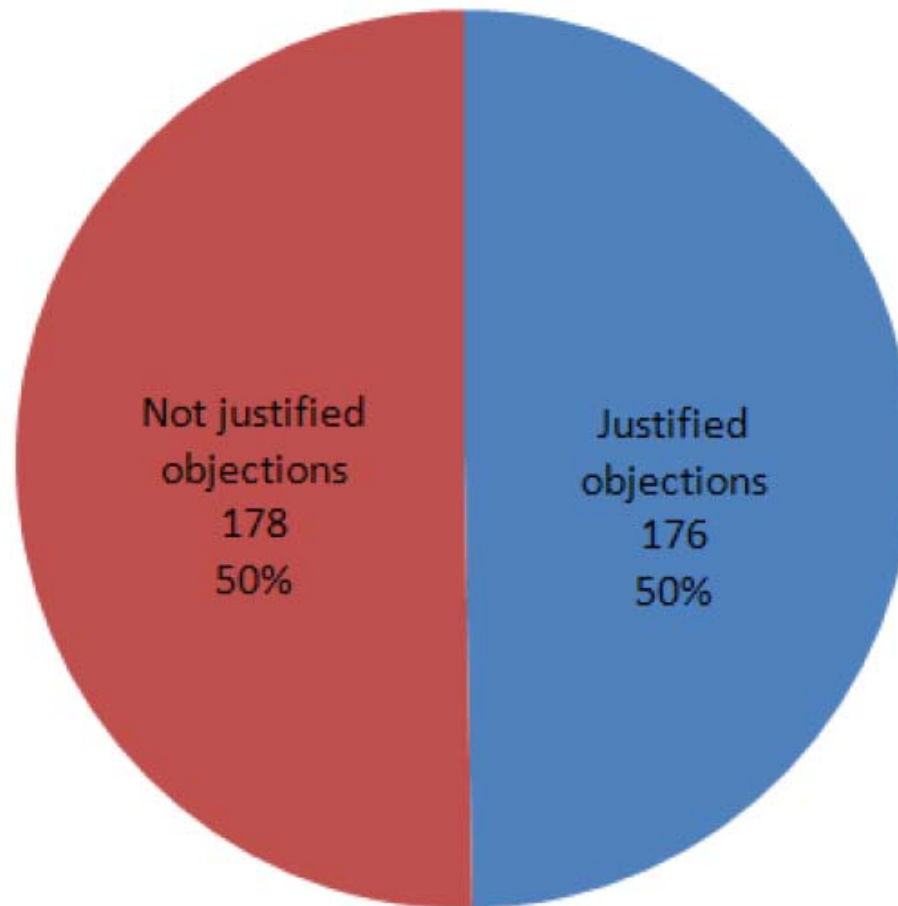
SAIDI



SAIFI & SAIDI Trends 2006-2009



Complaints on Voltage Quality in HEP-ODS in 2009



HERA's Position Paper on Quality of Supply



- Concept of Quality Regulation for
 - Continuity of Supply
 - Commercial Quality
 - Voltage Quality
- Regulatory Instructions for Data Collection
 - Continuity of Supply
 - Commercial Quality
- Roadmap for Introducing Quality Regulation
 - Incl. amendments to the Energy Market Act, General Rules, Tariffs and other Secondary Legislation

Regulatory Instructions for Continuity of Supply Data Exchange in 2010



- HEP-ODS collects and delivers to HERA the widely accepted indices SAIFI and SAIDI for long term interruptions on the level of organisational unit, distribution district and whole HEP-ODS
- Every organisational unit is part of a zone defined with the number of customers:
 - Zone A (rural): <15,000 customers
 - Zone B (suburban): 15,000-30,000 customers
 - Zone C (urban): >30,000 customers
- Interruptions are classified as planned and unplanned (including *Force Majeure*)
- Interruptions are classified by voltage level tied to the interruption origin.

Table for Continuity of Supply Data Exchange



Field	Description
YEAR	Year
DPKEY	Distribution district
ORGKEY	Organizational unit of the distribution district
ZONE	Zone (A, B ili C)
TYPE	Type (unplanned, planned)
FM	Force Majeure, Exceptional events
VOLTAGE	Voltage level (HV, MV, LW)
SAIFI	System Average Interruption Frequency Index
SAIDI	System Average Interruption Duration Index

Continuity of Supply Report



ZONE	Interruptions	SAIFI				SAIDI, min			
		HV	MV	LV	Total	HV	MV	LV	Total
Zone A	Unplanned with FM								
	Unplanned no FM								
	Unplanned								
	Planned								
	Total								
Zone B	Unplanned with FM								
	Unplanned no FM								
	Unplanned								
	Planned								
	Total								
Zona C	Unplanned with FM								
	Unplanned no FM								
	Unplanned								
	Planned								
	Total								
Total	Unplanned with FM								
	Unplanned no FM								
	Unplanned								
	Planned								
	Total								

Conclusions and Next Steps

- HEP-DSO collects data on quality of supply
- There are no regulatory rules for data collection yet
- HERA's power in quality regulation is to be developed through legal provisions and practice
- HERA will issue a Position Paper on Quality of Supply
- HERA will periodically (yearly) issue Reports on Quality of Electricity Supply apart from National Reports

Thank You!

Srđan Žutobradić

Croatian Energy Regulatory Agency

Ulica grada Vukovara 14

10000 Zagreb

Croatia