Transelectrica®

Societate Administrată în Sistem Dualist

Transelectrica Sustainability Report 2018

WE LEAD THE POWER

www.transelectrica.ro

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Statement of responsible persons

The information provided in Transelectrica's Sustainability Report of 2018, elaborated in accordance with the Global Reporting Initiative standard, in compliance with the provisions of European Directive 2014/95/UE transposed in the Romanian legislation through the Ministry of Public Finance Order no. 1938 of 17 August 2016, provides a fair image consistent with true facts regarding the non-financial aspects, part of ongoing business, which impact the Company's development and sustainability.

Directorate
Chairman
Marius Danut CARASOL

Member	Member	Member	Member
Claudia Gina ANASTASE	Andreea-Georgiana FLOREA	Constantin SARAGEA	Adrian SAVU

Message from the Directorate (102-14)

Dear shareholders, investors and partners

Administrating the electricity transmission grid under safe conditions for the operation of the National Power System, a grid consisting of over 9,000 km of high voltage overhead lines and 81 transformer substations represent huge responsibility that Transelectrica has and successfully fulfils year after year in its capacity of transmission system operator and strategic company at national and regional levels.

Our efforts in terms of sustainability have provided results in time but this last year we got more involved in a wide dialogue with all stakeholders in the Company and outside it, in order to better understand their expectations and needs. We have passed through such stages being at the same time a truthful partner both for the over 2,100 employees and for the shareholders, investors and authorities.

In this respect we have acquired the confidence of international rating agencies taking into account in 2018 Moody's Investor Service upgraded Transelectrica's rating from stable to positive, and Fitch Ratings reconfirmed the stable outlook of the Company's rating.

In the second consecutive year the National Power Grid Company Transelectrica SA publishes a sustainability report elaborated according to the recommendations of the *Global Reporting Initiative* (GRI) standard in non-financial domains. Last year we focused on environmental actions and environmental protection in the context of global trends for the energy future. We have been also faced with new challenges such as getting in line with the provisions of GDPR, which were managed in full responsibility and seriousness.

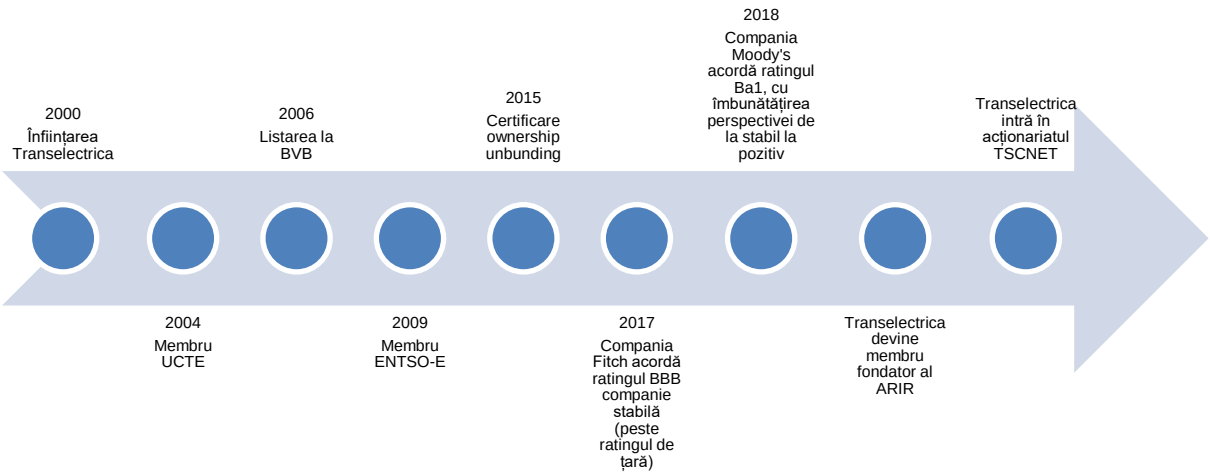
The sustainability report we submit now is the result of assumed corporative governance principles, as well as transparency and communication principles; but also of the Company's involvement in social corporative responsibility in active manner towards communities, employees and the environment.

We are proud to share the results of Transelectrica in terms of responsibility and we are ready to reconfirm our commitment to sustainability and lastingness!

Directorate of Transelectrica

Marius Danut CARASOL Chairman	Claudia Gina ANASTASE Member	Andreea Georgiana FLOREA Member	Constantin SARAGEA Member	Adrian SAVU Member

Company presentation



Company identification in national and European context (102-1)

In the value chain of electricity activities Transelectrica holds the central place of transmission system operator, a regulated natural monopoly activity, with the mission to provide electricity transmission services while maintaining the operational safety of the national power system under non-discriminating access terms for all users.

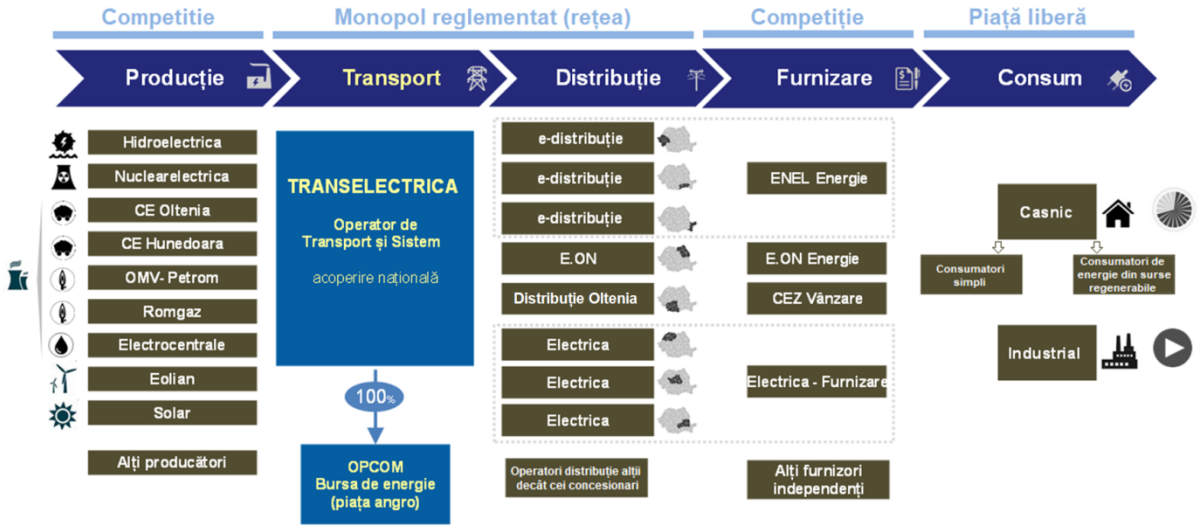
A strategic company in national and regional context, Transelectrica also provides functions of balancing & metering operator, as well as operator allocating capacities on interconnection lines.

The business model matches the standard profile of a Transmission System Operator (TSO), which is designed as unitary model at European level through the European strategy and energy legislation applied in all community countries and transposed as such in the national legal framework.

Strategic company in the energy domain, Transelectrica passed from national dimensions to a pan-European approach of its activities

At European level the energy sector is found in a process of profound transformation.

Emphasis is laid on the transition from a predominantly national development model for the energy sector to an integrated development model coordinated at European level, which should provide unitary continental development while enabling adaptation to national specificities and the pursuit of European states' legitimate interests.



As an integral part of the European interconnected system Transelectrica is responsible not only for the operation of the Romanian Power System at safe and qualitative parameters and for the national consumers supply but also, together with the other Transmission System Operators it extended Europe-wide its competency and responsibility areas (36 countries with 532 million consumers).

Transelectrica, member of the European family of Transmission System Operators

The Romanian power system has been integrated in the European electricity transmission system long before Romania's accession in the European Union.

Since October 2004 Transelectrica has become a partner of electricity transmission companies across Europe, as member of UCTE, ETSO and, as of 2009, ENTSO-E.

ENTSO-E promotes important aspects of the energy policy with a view to promote the completion and operation of the internal electricity market and cross-border trade, as well as to provide best management, coordinated operation and sound technical development of the European electricity transmission network.

Transelectrica, member of TSCNET and of JAO since 2018

From August 2018 on Transelectrica became member in the Regional Security Coordination Centre TSCNET Services GmbH, namely a Centre shareholder, and member in the European Joint Allocation Office JAO SA in December 2018.

TSCNET was established to serve the transmission system operators of eastern-central-western Europe, with a view to have coordinated implementation of European network codes while JAO coordinates the bids performed in order to allocate long-term capacities, being designated as Operator of the Single Allocation Platform (SAP).

Transelectrica, partner of European institutions in the elaboration of the new legislative energy package

The European energy and environmental policies, endorsed by the successive legislative packages approved at European level rely on enhanced safety

of consumers' supply, higher energy efficiency, decarbonising the generation mix by integrating renewable sources and implementing efficient storage solutions.

As part of the European family by being ENTSO-E member Transelectrica is a valuable partner in the elaboration and negotiation of legislative packages applicable into the energy sector.

European network codes are documents regulating the aspects of the synchronously interconnected electricity systems operation and the harmonisation and integration of national electricity markets, thus facilitating the implementation of the single European energy market.

Through its technical and operational expertise as transmission system operator Transelectrica has been an active partner both in the elaboration of codes in ENTSO-E structures and during the negotiation stages at the European Commission and, by means of the competent ministry, at the European Parliament.

Transelectrica, strategic partner in the elaboration of the Development plan for the European electricity transmission network

Electricity transmission networks play a crucial role in reaching the European aspirations, especially as regards safe consumer supply, the internal energy market and the integration of renewable sources.

Within ENTSO-E the development of the pan-European transmission infrastructure is planned in integrated coordinated manner (TYNDP: 10 years' European masterplan for the transmission network, which also includes assessment on the adequacy of the pan-European electric power system); main corridors and priority projects are identified (list of PCI) which Regulation (EU) no. 347/2013 provides incentive mechanisms for in order to expedite their implementation (competent authority responsible to facilitate and coordinate the projects of common interest, community financial assistance - e.g. the Connecting Europe Facility).

Transelectrica, valuable partner in European projects

In parallel with the negotiations to adopt the regulatory energy framework a number of projects are carried out at TSO's level in order to implement the single European energy market, applying European network codes or investigating the specific challenges of the new legislative reference: the Clean Energy Package.

Integrating the Romanian electricity market into the European internal one represents a major objective for Romania, embedded in the strategic goal to establish the European internal energy market (IEM), a priority target of Europe, which requires coherent measures and joint efforts of all involved entities: competent ministries, regulatory authorities, transmission system operators, energy exchanges.

Operating since 2014 in the 4M MC market coupling (Romania, Hungary, Slovakia and the Czech Republic), Transelectrica became partner in the projects executed in eastern-central-western Europe (CORE region), being also active in the south-eastern European one (SEE region), thus expanding its involvement and competence Europe-wide.

At the same time by market coupling projects and the coordinated allocation of cross-border transmission capacity,

Transelectrica is also a part in the project developing and operationalising some platforms of trans-European transactions for balancing energy.

Such platforms will contribute to optimising the electric power systems across Europe, generating economic and social welfare and contributing to a greater safety in the electricity supply of European consumers.

Licences and certifications

Concession and license

Transelectrica holds the assets belonging to the state public domain under concession, namely the national electricity transmission grid (RET), being a public utility company.

The concession over RET and over the lands it is located on was granted for 49 years under the concession contract 1/29.06.2004, concluded between the Ministry of Economy and Commerce as grantor authority and Transelectrica as concessionaire.

Transelectrica's activities are regulated by the primary legislation (the national framework being provided by Law 123 / 2012 and the European one by Directive EC/ 72/ 2009 and Regulation 714 / 2009) and the secondary legislation issued by ANRE, substantiated into licences, establishment permits, tariff setting methodologies (ceiling revenue type for transmission and cost plus for system operation, tariffs, framework contracts, procedures and others).

The Company carries out its activities as Romania's transmission system operator according to Licence 161/2000 for the provision of electricity transmission services, system services and balancing market administration, granted by Decision 865 / 22.12.2000 issued by the President of the National Regulatory Authority in the Energy domain, with later amendments and additions.

The licence holder is the single provider of public electricity transmission services to all users of the electricity transmission grid, as well as of system services to all SEN users. The licence was granted for 25 years, being valid until 22.12.2025.

Certification

In accordance with the provisions of article 31 from the Electricity and natural gas law 123/2012, with later amendments and additions, the transmission system operator (TSO) of the National Power System is certified by ANRE, according to a certification procedure completed by the Authority's issuance of a final decision certifying the TSO.

Pursuant to the European Commission's final Endorsement 7053 of 12.10.2015, in accordance with article 3 paragraph (1) of Regulation (EC) 714 / 2009 and with article 10 of Directive 2009/72/EC, ANRE ascertained that Transelectrica complies with the legal requirements of its certification as transmission system operator of the National Power System as per the ownership unbundling model, while ANRE's Regulatory Committee approved the certification of the National Power Grid Company Transelectrica SA, ANRE Order 164/07.12.2015 being issued in this respect.

Mission, vision, values *(102-16)*

Mission

The sustainable provision of public electricity transmission services and system services to all users of the electricity network under non-discriminating terms in view of maintaining the operational safety of the national power system. Maintaining a key role on Romania's electriciy market and on the southern-eastern European one supporting the operation and integration of energy markets. Providing the operation, maintenance, upgrade and sustainable development of the electricity transmission network with a view to maintain the stable state of the national power system under economic efficiency and quality terms.

Vision

Taking into account Transelectrica is located at the cross-road of eastern-central-western (CORE) and southern-eatern(SEE) European regions the company aims at becoming an inter-regional integration factor, thus contributing to higher pan-European security and sustainability.

In terms of corporative management Transelectrica aims at being integral part of the society relying on sound principles, promoting responsible people in its team and sustaining value development in all its structures

Values

The underlying values of all activities are sustainability, integrity, professionalism, respect and social responsibility. Opinion diversity is appreciated within the Company regardless of hierarchies and we deem exchanges of opinion as possible evolution drivers.

Investment strategy and development plan (201-1, 417-1)

Transelectrica plans developing the electricity transmission network (RET) taking into account the present-day stage and the forecasted development of consumption, generation park and electricity exchanges, while every 2 years' elaborating a Development Plan for the following 10 successive years, submitted to ANRE's and grid owner's approval. In 2018 the RET Development Plan for 2018-2027 was completed, which includes all updated information for this time interval.

The RET Development Plan is a public document providing the main aspects of the current state and forecasted development of RET in the next ten years, placed at the disposal of all stakeholders.

The RET Development Plan takes into account the requirements and priorities provided in the National Energy Strategy and Policy. They constitute determining references to identify the priority directions and to forecast the development trends of the energy sector, which were taken into account for planning.

Being an integral part of the European power system Transelectrica elaborates the RET Development Plan in correlation with the European Development Plan of the electricity transmission network in the next ten years – "Ten-Year Network Development Plan" (TYNDP).

The Company's development strategies are aligned and complementary with the European ones. Thus projects with major significance in the European networks are developed in the grid operated by Transelectrica, which were included in the list of projects of common interest (PCI).

Main activities (102-2, 102-4, 102-5, 102-6)

Transmission system operator with key role on the Romanian electricity market Transelectrica has also attributions to administrate and operate Romania's electricity transmission system and to provide electricity exchanges between Romania and the countries she is interconnected with in central Eastern Europe in its capacity of ENTSO-E member.

In accordance with the Licence terms Transelectrica carries out the following regulated activities:

- Providing electricity transmission and metering services on the wholesale electricity market in its capacity of metering operator;
- Providing system services by means of the dispatcher managerial steps, using specific systems and installations;
- Organising and administrating the balancing market in its capacity of administrator of this market;

Beginning with 2006 Transelectrica has been listed on the Bucharest Stock Exchange.

2006 was the starting point of the Company's sustainable relationship with its shareholders. The Company-issued shares are transacted on the regulated market managed by the Bucharest Stock Exchange under Premium category and TEL symbol.

- **Company shareholders' structure on 31-12-2018***

SHAREHOLDER	SHARES	WEIGHT (%)
Romanian State	43,020,309	58.688
DEDEMAN SRL	4,503,567	6.144
Other legal person shareholders	20,157,347	27.499
Other natural person shareholders	5,621,919	7.669
TOTAL	**73,303,142**	**100**

* The Shareholders Register and the history of holdings can be found with the Central Depositary SA
** The legal person DEDEMAN SRL became significant minority shareholder as of 28.09.2017

In the context of implementing the corporative governance rules and good practice Transelectrica has engaged in active communication with shareholders and investors, using several communication channels and dedicated interfaces in this respect. The Company is aware of the responsibility pertaining to it, in its capacity of publicly transacted company.

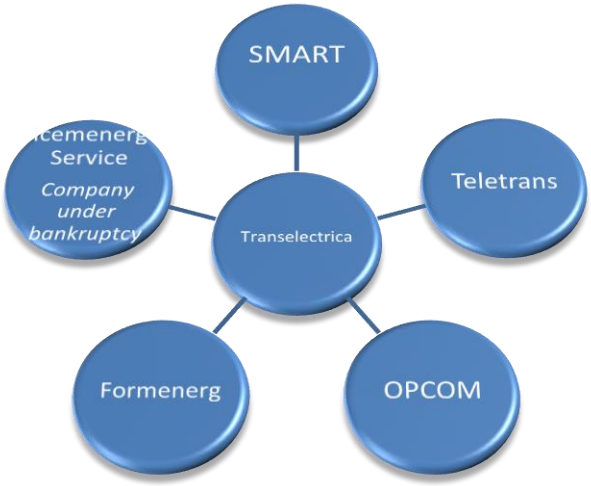
The diversity of shareholders and its quotation in the main BVB indexes emphasise the transparency requirements, the information relevance and its

dissemination rate, while maintaining an uninterrupted dialogue with the investor public.

Group structure (subsidiaries) (102-45)

On the date of this report Transelectrica has five subsidiaries, Romanian legal persons organised as joint stock companies, three of which it is the sole shareholder: Company FORMENERG SA (Formenerg), Company of Telecommunication and Information Technology Services in Electricity Transmission Networks TELETRANS SA (Teletrans) and Company ICEMENERG-SERVICE SA (the last one under bankruptcy).

In case of the Maintenance Service Company in Electricity Transmission Networks SMART SA (SMART), its share capital was increased on 23.12.2014 by the Board of Administration of SMART with the value of lands ownership certificates were previously obtained for and the Company became majority shareholder with 70.006% of the subsidiary's share capital.



In case of the Electricity and Natural Gas Market Operator Company OPCOM SA (OPCOM), its share capital was increased on 13.02.2018 by AGA of OPCOM with the value of one plot of land which ownership certificate was previously obtained for and the Company is its majority shareholder with 97.84% of the subsidiary's share capital.

Risk management (102-11, 102-30)

The strategic requirements for operational safety and continuity determine the Company to approach risk management in proactive manner, with a view to identify and treat potential risks before generator events occur while also preparing beforehand the specific technical, operational and financial solutions to counteract the effects of possible risks.

The Company's risk management complies with applicable legal and regulatory requirements to have risk control capacities adequate for the Company's risk profile, in order to identify, assess, manage, monitor, communicate, consult and report risks.

The set of risk management solutions used by Transelectrica aims at supporting the organisation to reach its objectives and to contribute to improved planning by risk mitigation measures comprising organisational and financial solutions in an optimised structure.

Risk management policy and objectives of Transelectrica

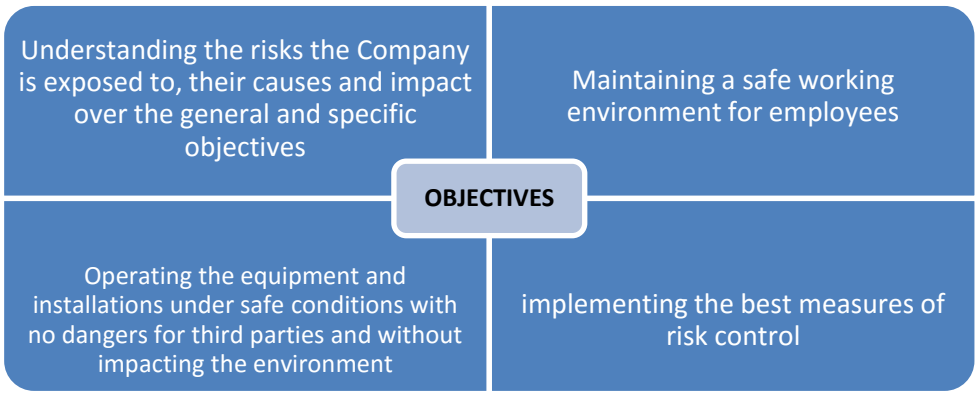
Transelectrica's policy consists in providing the uninterrupted running and operational management of the National Power System in direct manner but also by means of its branches, subsidiaries or service contracts with speciality suppliers,

in accordance with the quality, security and efficiency norms provided in the Technical Code of RET, granting priority and paying particular attention to criteria of employees' safety and health as well as to environmental protection.

The continuity of strategic functions for Romania's SEN, that of transmission system operator has to be maintained, even under the worst circumstances.

Risk management facilitates an effective efficient achievement of Transelectrica's objectives. Knowing the threats – the strategic, operational, financial and hazard risks the Company is exposed to enables their hierarchical treatment, depending on the likelihood of their occurrence, their impact on objectives and the costs involved in the measures reducing the occurrence prospects or limiting their unwanted consequences.

To this effect the Company set out a series of strategic objectives which the uniform purpose of is to establish and consolidate a proper risk management framework.



Organisational framework of risk management (102-33)

In accordance with applicable legislation: SGG Order 600/2018 approving the Code of internal managerial audit in public entities, a Risk Management Team was set up in Transelectrica at Company level (EMRC), the Commission monitoring the implementation of the Internal - Managerial Control System and the Technical Secretariat of the Commission monitoring the implementation of the Internal - Managerial Control System (CM SCIM) with attributions and responsibilities.

At Transelectrica level risks that might substantially impact the achievement and execution of Company objectives are managed in accordance with internal procedures, so that each organisational entity has the obligation to systematically review at least once a year the risks associated with its activities (including the Company-wide significant risks, insofar as they exist), to elaborate proper plans aiming at mitigating the possible risk consequences, thus nominating responsible persons to put in practice the respective plans and draw up risk tracing and monitoring forms, every time it is deemed necessary.

Risks associated to objectives and/or activities are identified and assessed in each Company organisational entity in accordance with the items of the *Risk register*.

The Monitoring commission examines and prioritises the significant risks that might impact the Company's objectives by establishing each year the risk profile and risk tolerance limit.

Keeping risks under control

The activities established to keep risks under control in 2018 diminished the likelihood of occurrence and the risk impact against the inherent risk levels.

Risks that occurred were handled in accordance with the adopted strategy, required by the circumstances that facilitated such risk occurrence.

In some cases of risk occurrence control / check-ups were enhanced in similar circumstances in order to prevent new risk occurrences or possible new risks.

In 2018 risk management took place in adequate manner Company-wide, fully and timely complying with legal requirements and internal regulations.

To establish the risk management strategy the steps below were followed to support internal entities in their activities:

Consequently risk management activities of 2018 were carried out in accordance with internal procedures and legal provisions Company-wide, fully and timely complying with legal requirements and internal regulations. The Company understands to turn risk management into a priority in the future and intends permanently developing the methods and techniques used with a view to obtain better and better results and to increase the functionality of internal processes.

Relevant indicators

Key figures

≈9.000 km
Lungime rețea

BBB stabil
Rating de credit (Fitch)

400/220/110 kV
Niveluri de tensiune

≈ 4.115 mil Lei
Plan de dezvoltare 10 ani

25 ani
Licență OTS

49 ani
Concesiune rețea

** The sum of the 10 years' development plan represents the total investments planned in the 2018-2027 RET Development Plan*

Rating

In 2018 Fitch maintained the BBB rating, stable outlook, granted in 2017 as recognition of the Company's efforts to reach operational excellence and for its responsible approach to the business environment it operates in. At the same time Moody's granted Ba1 rating, improving the outlook from stable to positive, showing highly powerful stable predictable financial values, a path with development trends characterised by coherent implementation of regulatory norms. Expectations are to see this trend grow.

Relevant non-financial indicators

No.	Indicator		Outage cause	Total at consumer's / Total at generator's
1	ENS	MWh	a. Planned outages	0
2	ENS	MWh	b. Unplanned outages determined by force major	476.0
3	ENS	MWh	c. Unplanned outages determined by particular meteorological conditions	0
4	ENS	MWh	d. Unplanned outages determined by other operators, users, generators	0
5	ENS	MWh	e. Unplanned outages owed to the TSO	118.81 / 3,088.83
6	AIT	min/an	a. Planned outages	0
7	AIT	min/an	b. Unplanned outages determined by force major	4.52
8	AIT	min/yr.	c. Unplanned outages determined by particular meteorological conditions	0
9	AIT	min/yr.	d. Unplanned outages determined by other operators, users, generators	0
10	AIT	min/yr.	e. Unplanned outages owed to the TSO	1.13/29.30

NOTE:
ENS – energy not delivered to users / not generated in power plants because of long outages
AIT – average interruption time

Relevant financial indicators (203-1, 302-1)

481 million Lei **Sum total of investment contracts signed in 2018**	2,719 million Lei **Total revenues 2018***
1,100.37 GWh / 964.91 GWh **One's own technological consumption (/losses) 2018/2017**	
58.2 TWh/60.7 TWh **Electricity consumption / generation in 2018**	86.8 million Lei **Total minor and major maintenance, 2018**
98.1% **Application degree of minor and major maintenance planned for 2018**	

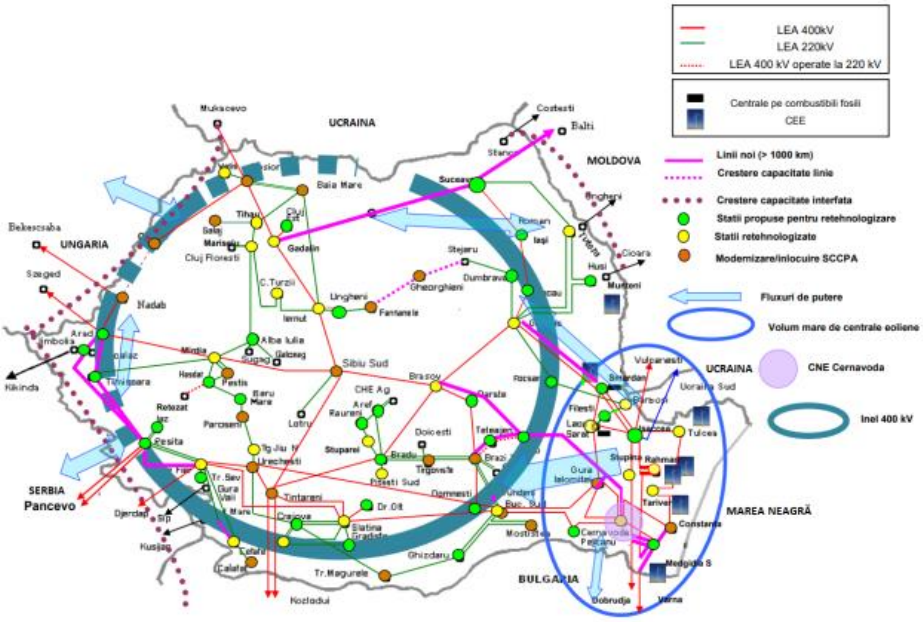
* According to preliminary financial statements

Investments in 2018 *(203-1)*

The most important investiment projects signed in 2018	Objectives commissioned in 2018
• Refurbishment of the 220/110 kV substation Craiova Nord; • Refurbishment, the 220/110 kV substation Hasdat; • Refurbishment, 400/110/20 kV substation Smardan; • Connecting the 400 kV OHL Isaccea - Varna and 400 kV OHL Isaccea - Dobrudja in the 400 kV substation Medgidia Sud Stage II - the 400 kV double circuit OHL; connections in Medgidia Sud substation; • Mobile 110 kV, 220 kV and 400 kV bays; • Refurbishing the 110 kV substation Medgidia Sud; • Replacement of AT & Transformers in electric substations, Stage 2, phase 2, Lot I - autotransformers; • Replacing AT & Transformers in electric substations, Stage 2, phase 2, Lot II - Transformers; • Refurbishing the 220 kV substation Otelarie Hunedoara; • Installing the 250 MVA transformer T3 in the 400/110 kV substation Sibiu Sud; • Upgrading the 400 (220)/110/20 kV substation Munteni; • Converting the axis Portile de Fier - Resita - Timisoara - Sacalaz - Arad to 400 kV - stage I - 400/220/110 kV substation Resita; • Replacing the components of EMS SCADA AREVA - Hardware component; • Remote protection amplifier for the 220 kV OHL Iernut - Campia Turzii;	• The 400 kV interconnection OHL Resita (Romania) - Panchevo (Serbia); • Upgrading the 110 kV & 20 kV substations Suceava; • Replacing AT and transformers in electric substations - Stage 2 - Lot I – autotransformers; • Upgrading the 400/110/10 kV substation Cluj Est; • Upgrading the command-control-protection of the 220/110/20 kV substation Sardanesti; • TB Bucharest - Installing optical fibre to the 220 kV OHL Fundeni - Brazi Vest - lot 1; • TB Bucharest - Connecting substations Turnu Magurele, Mostistea, Stalpu, Teleajen to the optical fibre network of CNTEE Transelectrica - lot 2; • Integrated security systems for substations and branch offices, DEN & DET-s - Integrated security system in electric substations, Stage IV - the 220/110/10 kV substation Fundeni; • Upgrading the 220/110 kV substation Dumbrava - Stage I 220 kV, AT1 bays, measure 1 și 2; • Refurbishing the 400/220/110/20 kV substation Bradu;

Benefits of achieving this wide investment plan

- Increasing the operational safety of the SEN;
- Facilitating electricity transmission from excess generating areas to consumption zones;
- Providing an economic operational regime of RET;
- Increasing the interconnection capacity both with ENTSO-E member countries and with those outside the EU – Moldova, Serbia and closing the national 400 kV ring;
- Reducing operational and maintenance expenses;
- Growing electricity quality, improving performance indicators;
- Reducing one's own technological consumption of RET, increasing energy efficiency;
- Introducing new technologies, implementing smart grid concepts;
- Digitalising the transmission & system infrastructure and operating the managed electricity markets;



Transparency, liaising with stakeholders and material topics - dialogue of the Company and society

We firmly believe an important part of Transelectrica's progress resides in the consolidation of relations between the Company and the society, by means of dialogue and permanent commitment. Transelectrica maintains a steadfast commitment to society, facilitating access to relevant information.

Communication represents the key item in order to institute a trustful relationship with partners

Transelectrica performs its liabilities assumed towards investors, shareholders and the other stakeholders by means of transparent constant dialogue.

The instruments which the Company carries out such liabilities with:

- Information posted on the Company's website;
- Current reports transmitted to BVB;
- Periodical meetings with investors and financial analysts.

Identification and selection of stakeholders (102-40, 102-42)

Rigorous internal processes were applied in order to select the information provided in this report with respect to the events and actions performed in non-financial perspective.

The most important 12 stakeholders were identified by using specific instruments for qualitative and quantitative analysis, depending on the need of information they might have in relation to that provided by Transelectrica. At the same time the most relevant topics of interest of such stakeholders were identified, and they were used to formulate the report's main issues.

Approach with respect to the involvement of stakeholders (102-21, 102-43)

Ever since its listing on the Bucharest Stock Exchange Transelectrica has prioritised the implication of stakeholders in Company activities, especially as regards rendering transparent the specific activities. In this respect Transelectrica directed its presentations towards quarterly, half-yearly and annual results, taking into account the stakeholders' needs and permanently enhancing the efficiency of communication means with them.

Their opinions have been expressed during periodical meeting with the Company's management. Subsequent steps have taken all these opinions into account and the feedback obtained from stakeholders regarding the 2017 report sustained the permanent improvement of our activities.

Transelectrica set an objective to improve communication with stakeholders and get them permanently involved in Company activities, until strategic steps are completed.

Last but not least, stakeholders identified in the previous report have been consulted all along 2018 with a view to provide future information in accordance with their expectations.

Defining the report content and list of material topics (102-31, 102-32, 102-44, 102-46, 102-47)

The content of Transelectrica's sustainability report was established after complex qualitative and quantitative appraisals, but also using the information obtained as feedback from stakeholders. The recommendations of the Global Reporting Initiative regarding the detail level of each topic were taken into account when elaborating the report, especially the interests we identified from stakeholders when Transelectrica's 2017 Sustainability Report was submitted.

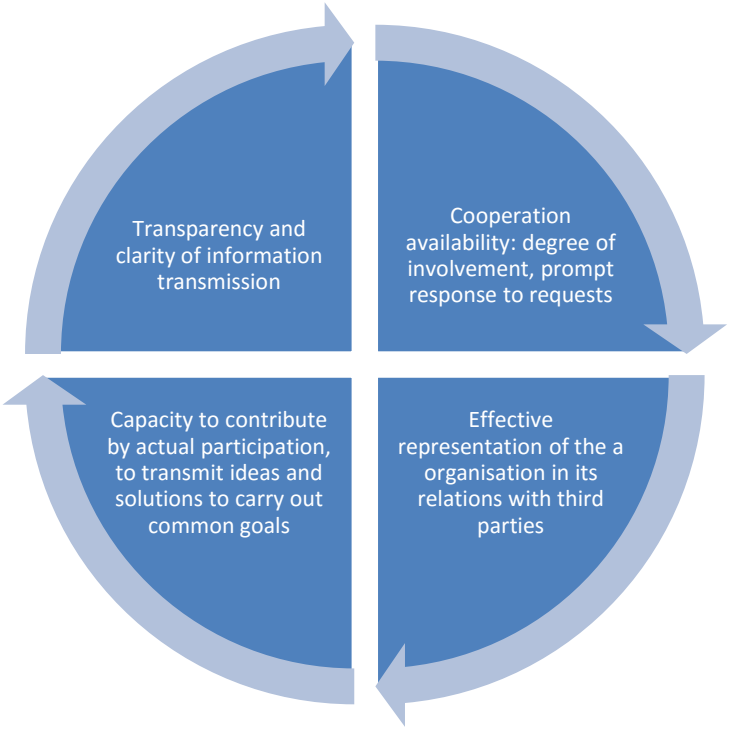
Each topic approached aims at explaining the aspects that are not found in other kinds of reports and at outlining the Company's prospects in terms of sustainability.

List of material topics

Domain	Material topic	GRI/one's own indicator	Related chapter
Corporative governance	Governance system	102-18	1
	Assuming the corporative governance principles	102-16	1
	Delegating competences	102-19	1
	Business ethics	102-16, 205-1, 205-2, 205-3, 206-1, 418-1	1
Strategy, innovation and financial development	Financial indicators	201-1, 203-1	1
	Technical indicators	Own indicator	1
	Risk management	Own indicator	1
	Energy efficiency	302-1, 302-4	7
	Strategic objectives in research and innovation	302-4, 302-5	8
Social responsibility and towards employees	Training and improvement	404-2,	2
	Diversity, promotion of parity, eliminating gender discrimination and promoting women in managerial positions	401-1, 401-3, 405-1, 405-2, 406-1	2
	Labour safety and security	Own indicator	3
	Corporative social responsibility policy	Own indicator	5
	Dialogue between the company and society	Own indicator	1

	Community needs	413-1	5
	Implication in society	203-2	5
	Information, employees' consultation and relation with trade unions	403-4	2
Environment	Environmental management system	308-2	4
	Environmental risks, opportunities and costs	Own indicator	4
	Water, energy and waste management	Own indicator	4
	Preventing and limiting the environmental impact	Own indicator	4

Communication, cooperation, representation



Business ethics (102-17)

Conformity management system (102-25, 103-1, 103-2, 103-3, 205-1, 205-3)

Throughout 2018 measures included in the National Anti-corruption Strategy (SNA) were implemented and further emphasis will be laid on their improvement. Mention should be made there has been no trespassing of applied norms such as SNA, no complaint or notices in this respect.

What more is, in 2018 a procurement contract model was elaborated including a chapter dedicated to "Anti-corruption and conformity clauses".

Also the Company paid particular attention to appropriating the norms applicable to its activities, which has led to a complete year with no case of employee misconduct or conflict of interests, in accordance with the SNA specifications.

Code of conduct and ethics (205-2)

The Ethical and Professional Conduct Code of Transelectrica Personnel, reviewed in 2017, is the general document comprising the internal regulatory frameworks for Company employees and providing information about the manner in which they should behave in moral and professional terms, both during professional activities and beyond them. At the same time it provides a guarantee that Transelectrica's personnel has got all the information necessary for ethical behaviour but also proof of the Company's reliable treatment of partners. The review made cleared up a series of aspects pertaining to corruption fighting, professional obligations and internal norms.

The Ethical and Professional Conduct Code is available on the Company's internet page.

Protection of personal data (418-1)

Taking into account legal provisions with respect to personal data, particularly when applying Regulation (EU) 2016/679 of the European Parliament and Council of 27 April 2016 regarding protection of natural persons in terms of processing their personal data and the free circulation of the same data, called GDPR, mention should be made in 2018 Transelectrica took permanent action in order to comply with applicable provisions.

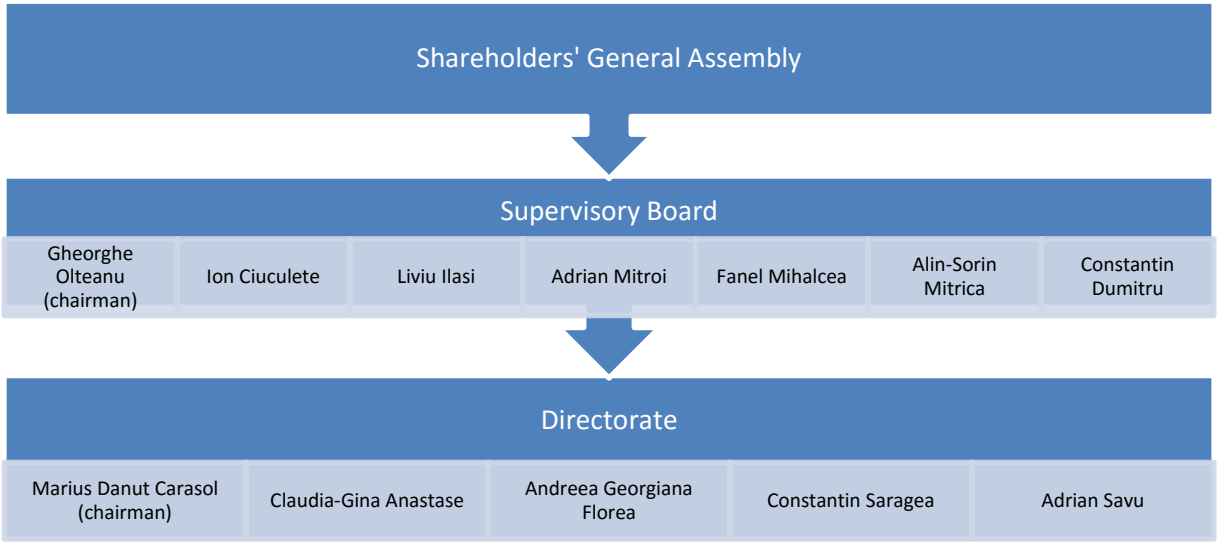
Consequently no acknowledged complaints were registered with respect to the protection of personal data or their loss.

Anti-competitive or anti-trust behaviour (206-1)

Taking into account the specific activities of Transelectrica and its special nature of company with natural monopoly on the electricity transmission market, there have been no cases of anti-competitive or anti-trust behaviour. Therefore in 2018 no legal proceedings were instituted for law suits of this kind.

Corporative governance (102)

Governance system (102-7, 102-18, 102-19, 102-22, 102-23, 102-24, 102-26, 102-27, 102-28)



* On 31.12.2018

The Shareholders' general assembly (AGA) is the governing body of Transelectrica, with express limitative competence. AGA can be ordinary or extraordinary, specific attributions being provided in the Articles of Association. All shareholders are entitled to participate to AGA and to cast their vote.

The Company is managed under a two-tier system according to the Company Law 31/1990, republished, with later amendments and additions, by a Directorate monitored by a Supervisory Board. The Supervisory Board has seven members, appointed after a selection procedure for four years at the most. The Supervisory Board chairman is elected by its members. Supervisory Board members are appointed by the Shareholders' General Ordinary Assembly complying with the provisions applicable to companies admitted for transaction; they are selected in accordance with the provisions of OUG 109/2011 on the corporative governance of public enterprises. Supervisory Board members in office on 31.12.2018 have a provisional mandate until the selection procedure is completed. The provisional mandate of Supervisory Board members found in office on 31.12.2018 is of 4 months.

According to OECD principles, an effective corporative governance regime should lead to markets transparency and efficiency, be compatible with the rule of law and clearly define the division of responsibility between competent bodies for supervision, regulation and application of legal provisions. Corporative governance regimes should also protect and facilitate the exercise of shareholders' rights and provide fair treatment of all shareholders, including the minority and foreign ones. On 26.09.2017 the Shareholders' General Assembly approved substantial Articles of Association changes in order to increase the Company-wide effectiveness of corporative governance by observing the applicable legal framework (Decision 10/2017 of the Shareholders' General Extraordinary Assembly), including clear establishment of separate Company governance from the control on the governance so that each company body can achieve its legally provided purpose, avoiding potential confusions between the Supervisory Board's attributions and the Administration Board's. The principle regulation of competence delegation and specific coordination of certain domains were also taken into account, while

maintaining responsibility with the directorate.

Assuming the governance principles

Once listing its shares on the regulated market of the Bucharest Stock Exchange (BVB) the Company adopted the corporative governance principles of the BVB Code. In accordance with BVB requirements Transelectrica made public to investors the Company's reviewed Corporative Governance Regulation.

The compliance with corporative governance principles is mirrored in the Conformity Statement with BVB's Corporate Governance Code, which the Company elaborates and publishes together with the Annual Report.

Also the Company's Supervisory Board includes the Nomination and Remuneration Committee, the Audit Committee and the Energy Security Committee. During the mandate term of Supervisory Board / Directorate member the appointed persons should meet the eligibility criteria and not be found in the incompatibility situations established by the applicable law or statutory provisions. In correlation with such obligations the Company is entitled to require Board members insurance reasonably necessary with respect to their compliance with such obligations.

Delegation of competence (102 – 19)

In order to have efficient Company governance attributions and to meet the established objectives under efficient economic conditions Transelectrica has developed a competence delegation system.

Competence delegation pertains for instance to:

a) Approvals for certain operations;
b) Approving / endorsing preliminary and/or subsequent documentation after the approval of certain operations; the documentation required according to legal provisions or internal regulations;
c) Approving operations that impact the property, up to a certain value;
d) Approving / endorsing preliminary and/or subsequent documentation after the approval of operations with property impact up to a certain value, which documentation is necessary according to legal provisions or internal regulations;

Such delegations observe the Directorate's limits of competence in terms of operational content and value; they expressly establish the limits of competence delegated by the Directorate and comply with the Company representation rule by joint signature.

National and international affiliations (102-12, 102-13)

In 2018 Transelectrica got affiliated to a number of 12 national and international specific associations, organisations bodies as follows:

- **ACUE-PD** - Association of Utility Companies in Energy - Generation and Distribution (www.acue.ro);

- **ALSTR** - Association of Live Work of Romania (www.smarsb/ro/alstr) – main activity being live works (LST);

- **AmCham** - Association of the American Chamber of Commerce in Romania (www.amcham.ro);

- **APEN** - Employers' Association "Energy" (www.fpen.ro);

- **ARIR** – Association for Liaising with Investors at Romania's Stock Exchange (www.ir-romania.ro) - providing current and potential issuers a development platform for professionals in the investor relation domain and contributing to implementing the best investor communication and corporative governance practice;

- **ASRO -** Standardisation Association of Romania (www.asro.ro);

- **CNR-CIGRE** - Association of CIGRE National Romanian Committee – member in the International Council of Large Electric Networks – CIGRE (www.cigre.org.ro) - international technical-scientific organisation aiming at developing the knowledge about high voltage networks and exchanging information between member countries;

- **CNR-CME** - Association of the National Romanian Committee of the World Energy Council (www.cnr-cme.ro) – non-governmental organisation member of the World Energy Council (WEC) since 1924;

- **CRE** - Romanian Energy Centre (www.crenerg.org) - independently and fairly sustains and represents the interests of its members;

- **ENTSO-E** - European Association of Transmission System Operators for Energy (www.entsoe.eu) - structure with essential part in promoting the internal electricity market and cross-border trade and in providing optimum management, coordinated operation and technical development of the European electricity transmission network;

- **LWA** - International Live Work Association - promoting live work (LW) elaboration, design and utilization while also providing supervision and consultancy in the domain, with no working attributions;

- **SIER** - Society of Electric Power Engineers in Romania (www.sier.ro) - constituted in 1990, it actively contributes to a higher role and efficiency of electric power engineers with a view to permanently develop Romania's power sector to the benefit of the national economy.

Prizes and rewards the Company was awarded

Throughout 2018 the Company or Transelectrica representatives were awarded a series of prizes and rewards as follows:

- ***Event: Energy-Centre Gala on „The venue of energy values" on 15.03.2018***

Mrs. Corina Popescu, Executive General Director of Transelectrica, was awarded the *„Excellence prize for new management approaches in energy”.*

- ***Event: Ladies in Energy Gala, organised by Focus Energetic on 25.06.2018***

Mrs. Andreea Georgiana Florea – Directorate Member of Transelectrica, was awarded the *„Excellence prize for activities performed to implement sustainable predictable financial policies in CNTEE Transelectrica SA”.*

- ***Event: 27 July 2018 Commissioning Ceremony of investments made in the 400/220/110/20 kV transformer substation Suceava***

An important node of the Electricity Transmission Grid providing safe operation of the National Power System and inter-connecting the country's historical provinces. The investment amounted over 24 million Lei and was fully covered from Company own funds.
Work was executed by an association of Siemens SRL with EMSENS PROD SRL.

On this occasion Siemens SRL awarded an honorary disc to CNTEE Transelectrica SA for its significant contribution to refurbishing the 400/220/110/20 kV transformer substation Suceava.

Our people – Human resources development and diversity

Human Resources Strategy

An important objective of any company is to provide a proper environment where each employee can find an opportunity to best use his/her entire potential, and to promote equal chances.
The main pillars of the Company's personnel strategy are provided below.

Promoting parity, eliminating gender discrimination and promoting women in managerial positions (102-8, 103-1, 103-2, 103-3, 401-3, 405-1, 406-1)

In our policy we make certain there is no discrimination in the recruitment, employment and promotion process, be it on gender, civil status, gender, religion, political views, ethnicity, race, nationality, genetic characteristics, age etc. *The Company's Internal Regulation* includes among others rules about the compliance with non-discrimination and removal of all infringement of human dignity. Thus in 2018 there were no discriminating incidents and, due to prevention, no corrective actions were necessary.

Transelectrica's employee structure depending on age and gender is specific to the Company's domain, noticing a slight ageing with causes pertaining to considerable devaluation of vocational education, general population ageing or the intensive development of alternative prosperous domains (e.g.: IT).

As regards eliminating gender discrimination, women advanced considerably in professional terms in the last decades, therefore their chances to develop a successful career increased. Worldwide an increasing number of women accede to executive positions, regardless whether these concern top leadership titles in companies or even governments.

35% women in top management in 2018, 3% more than in 2017

In this context, in Transelectrica the percentage of women employed in the executive part is over 26%, and that of women holding top management positions was over 35% of the total number in 2018, while in middle management - over 24%. At the same time, mention should be made in 2018 three of the five Directorate positions were held in turns by Mrs. Georgeta-Corina Popescu, Mrs. Andreea Georgiana Florea, namely Mrs. Claudia-Gina Anastase.

As regards the ratio between men's and women's remunerations, taking into account in the energy sector in general and in that of electricity transmission in particular the percentage of men is still higher than that of women, both in executive and in managerial positions, the revenue ratio is still sub unitary. Nevertheless the difference between women's and men's revenues in Transelectrica diminishes more and more, reaching to 9 percent in 2018.

Structure of employees (401-1, 405-2)

In terms of employee dynamics in 2018 we hired 169 persons, while 121 left the company; on 31.12.2018 the average age of all employees was 47. Still in 2018 there were 33 women and 7 men on child rearing leaves.

	Structure by gender categories (distinct for executive, leadership and top management positions)					
Type of position	Total number of employees	Age			Gender	
		Under 30	30-50	Above 50	M	F
Top management	85 (4.0%)	0 (0%)	43 (50.6%)	42 (49.4%)	55 (64.7%)	30 (35.3%)
Leading personnel (except top management)	298 (14.2%)	5 (1.7%)	184 (61.7%)	109 (36.6%)	225 (75.5%)	73 (24.5%)
Execution personnel	1720 (81.8%)	126 (7.3%)	942 (54.8%)	651 (38.0%)	1267 (73.7%)	452 (26.3%)
Total personnel	2102	131 (6.2%)	1169 (55.6%)	802 (38.2%)	1547 (73.6%)	555 (26.4%)

Performance analysis on the job and the remuneration policy (102-35, 102-36)

To improve work performance and efficiency on the job, but also to provide sustainability of Company's activities, employees' professional activity is assessed each year using performance indicators established by means of internal procedure.

The results of such assessments provide the Company a clear image of the performance of all Company employees. The information obtained after assessment can be used in risk management, both in forecasting and managing some risks from employees' activities and in the employee training and improvement process.

The remuneration system currently applied in Transelectrica was implemented on 01 January 2017, date as of which 4

permanent increments were introduced in the basic salary, namely labour seniority, uninterrupted service in the Company, loyal making increment and the confidentiality clause.

The remuneration system has got 9 classes of positions structured depending on the nature of performed activities and on the type of contribution to the Company.

Employee benefits are as follows:

- Providing internal equity by eliminating discrimination based on labour seniority or years within the Company;
- Providing salary indexations, benefits or promotions upon performance criteria, after the performance valuation performed annually according to pre-set criteria notified at the beginning of the valuation cycle.

Training programmes (103-1, 103-2, 103-3, 404-2)

Transelectrica takes into account to continuously develop the personnel by means of annual professional training and improvement programmes.

Over 500 Company employees benefitted of training programmes in 2018

Employees' improvement aims at providing personnel with the best qualification so that Company objectives can be met in a world where success depends on performance, efficiency, promptitude, ability to provide quality, diversity.

Company employees participated throughout 2018 to training programmes (delivered by providers of professional training) in various activity domains, the main ones being: technical – 226 people, emergency situations – 72 people, SSM and SSO – 53 people, procurement – 62 people, IT – 53 people, other domains (audit, economic, risk management etc.) – 102 people.

Internships

In 2018 Transelectrica further sustained the professional training of young generations of specialists in the energy domain by means of annual internships.

In 2018 a total number of 131 students attended internships in Transelectrica, residing both in Bucharest and in the country, 18% more than in 2017

Internships in Transelectrica confirm the Company's permanent concern for an active support and incentive for young generations to guide them towards the energy sector in general and to electricity transmission in particular.

In 2018 a total number of 131 students attended internships in Transelectrica, coming both from Bucharest and from the country. Partners of Transelectrica for internships were the Gheorghe Asachi University Iasi, Faculty of Electric Engineering, Energy and Applied Information Technology; the Polytechnic University of Bucharest, Faculty of Power Engineering; University of Pitesti, Faculty of Power Engineering and Nuclear Technologies; University of

Craiova, Faculty of Electric Engineering and others.

Employee information, consultation and trade union relations (102-41, 103-1, 103-2, 103-3, 403-4)

The trade union plays an important role in the relationship between employees and employer. The trade union promotes and protects its members' rights, taking into account their needs and opinions. A good employer / employees relationship is constituted upon efficient communication between employees' representatives and the company's.

Taking into account a new collective labour contract was negotiated in 2018 the representatives of the administration and those of employees held 6 meetings on this issue and 8 reunions for other topical subjects.

Like 2017, at this moment almost all Company employees are trade union members, thus demonstrating the utility of a trade union body established in order to promote their interests in its relations with the employer.

Also the absence of any work conflict this last year represents relevant indicator of the efficient intermediation between employees and employer.

Responsibility to employees

The training programme and the processes providing labour safety and health

Transelectrica sustains its employees in terms of labour health and security based on an internal procedure elaborated in accordance with the labour health and security law.

Workers' training in labour security and health consists of 3 stages:

Introductory-general training	is provided by the personnel from prevention & protection departments dedicated to labour security and health
Training on the job	is provided by the head of the working place
Periodical training	is provided by the personnel from prevention & protection departments dedicated to labour security and health or by the head of the working place

Prevention measures *(403-2, 403-3)*

In order to provide prevention measures, prevention and protection departments dedicated to labour security and health elaborate training topics for each stage defined by legislation according to the risk assessment related to each job.

With a view to provide proper prevention training is carried out with the following frequency:

- Minimum one annual training for each employee;
- Half-yearly for other categories of licensed technical personnel employed by Power Dispatcher Units;
- Monthly for operational and/or licensed personnel in terms of labour security and health from electric substations, and half-yearly for condensed periodical training;

Company-wide there are 20 persons responsible for security and health within the prevention and protection departments dedicated to security and health.

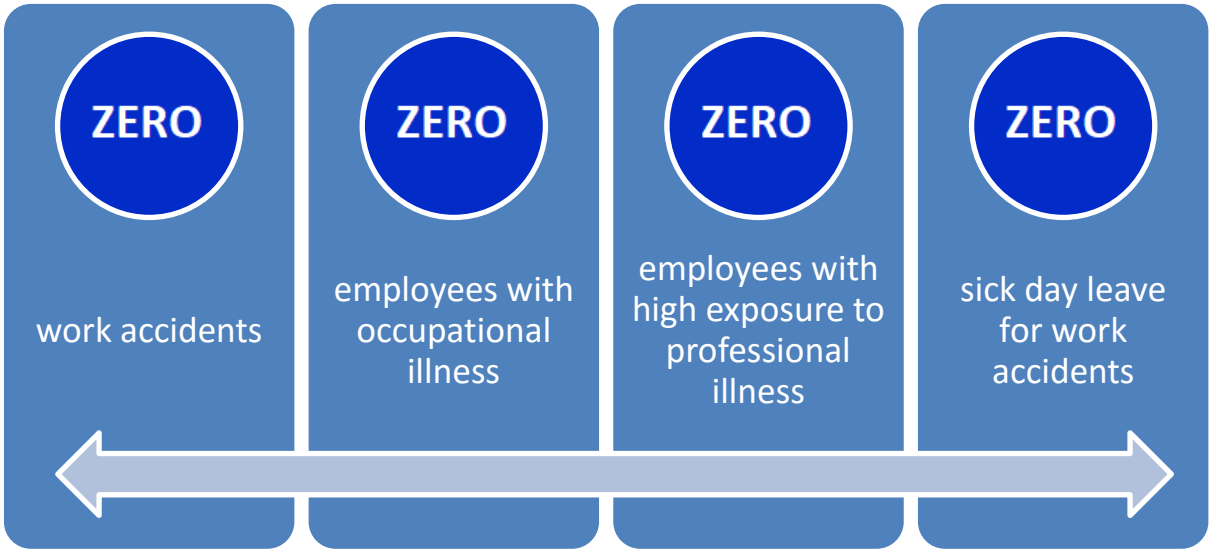
Upon training personnel in labour security and health domain, training methods and techniques are used such as: exposure, demonstration, case study, motion pictures, slides, projections, computer-assisted training.

Various training domains are approached, such as:

- Presenting the specific legislation of labour security and health
- Information and raising awareness about all kinds of risks identified for each job
- Presenting the working instructions for related activities
- Presenting first aid measures and providing examples thereof
- Presenting and raising awareness about fire extenguishing measures and employees' evacuation
- Employees are informed about all new items, labour accidents, events occurred

As far as events endangering the employees' security and health are concerned, in 2018 there were no work accidents or death caused by accidents on

the job. No sick day leave was registered for work accidents or occupational illness, and no Company employee experiences a high degree of professional illness or other high risk of professional sickness.



Organisation of mixed SSM teams (management – employees) and relevant activities in 2018 (403-1)

Labour security and health committees have been set up in accordance with applicable legislation in view of employees' consultation and participation to debates on all work security and health issues. Labour security and health committees perform based on their own operational regulation and they meet once a quarter and every time there is need.

The Company's Labour Security and Health Committee gathered four times in 2018. Among the issues debated according to each meeting's agenda were: endorsing the annual Work security and health plan Company-wide; examining the work security and health issues raised by branch and DEN employees; supervising the measure plans regarding work security and health; endorsing the operational procedures of work security and health; how working conditions are provided and workers' endowment with individual protective equipment; examining the labour security and health activities carried out last year, based on the elaborated report and report endorsement.

In 2018 when the Company's Professional training programme has been approved training activities kept their uniform character.

Environmental responsibility

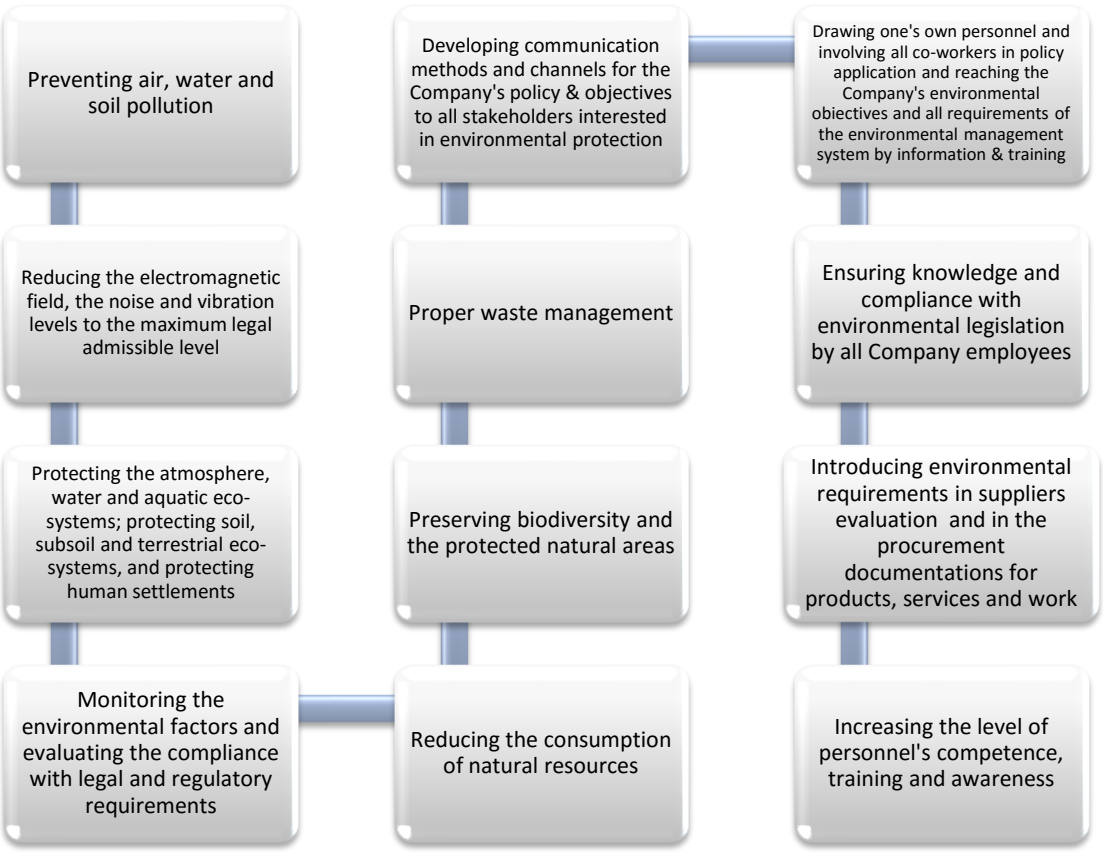
Environmental management system (103-1, 103-2, 103-3)

Environmental protection is an important objective for Transelectrica in view of Company's durable and sustainable development. Thus the environmental policy is integral part of the general policy, having as objectives to maintain a performing environmental management, to prevent and reduce pollution, to comply with legal national and European requirements and to provide sustainable development.

Transelectrica's environmental management system, certified according to the requirements of SR EN ISO 14001:2015 standard by SC SRAC CERT SRL (IQNet partner) set the necessary conditions to provide electricity transmission and dispatch, as well as to manage the electricity market in accordance with legal and other requirements the Company subscribed to, applicable to its environmental sides and to demonstrate the concern for pollution prevention and higher environmental performance.

Environmental objectives and targets were achieved by means of actions included in the annual Environmental Management plan meant to reduce air, water, and soil pollution, the levels of noise and vibrations, to improve waste and used water management, to restore the natural landscape after maintenance / development work, to protect the flora & fauna and to monitor environmental factors.

Main directions to reach environmental objectives



High voltage electric installations, mainly constituted of overhead lines and transformer & connection substations are installations of significant environmental impact caused by the technical complexity of such installations, the plots of land taken up and line lengths, usually crossing several counties.

RET installations do not discharge environmental pollutants under normal operational conditions. Certain chemical substances of pollutant nature can be accidentally leaked in the environment in case of untighten equipment, wrong operation, failures or during construction and maintenance operations.

Environmental aspects for technology and construction are detected and assessed from the first design stage. Such studies are then used to elaborate the Environmental Management Plan (for installations construction, operation and dismantling), which includes the action plan to reduce the impact and the Monitoring plan for environmental factors.

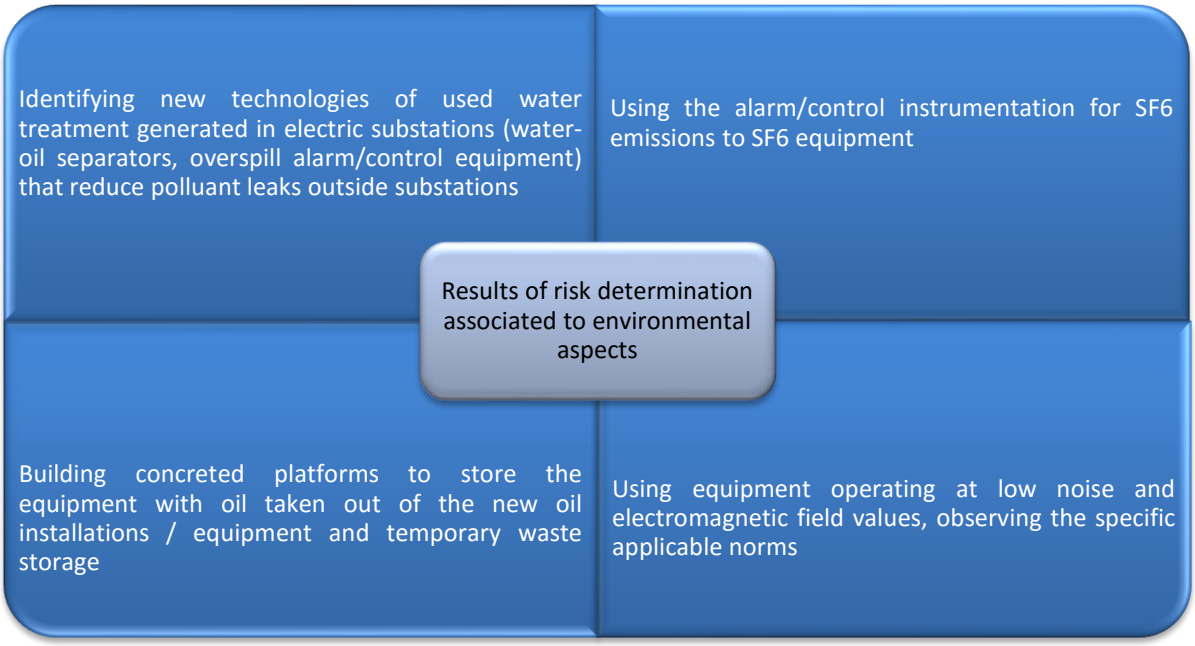
3.6 mill. Lei

Total environmental protection expenses

Transelectrica took measures in order to prevent pollution and reduce environmental impact, both during operational activities and during maintenance & investment operations, which mean construction-installation work.

In terms of total environmental protection expenses included in operation, maintenance and investment expenses, in 2018 they amounted to 3.6 million Lei.

Determining the hazards associated to significant environmental aspects identified for the activities/processes carried out in Transelectrica has led to a series of beneficial effects and of opportunities:



Management of environmental factors (304-2, 304-4, 308-2)

a) Land occupation

The surface taken up by electric lines and substations:

	No safety area [m^2]		Safety area [m^2]	
	Substations	OHL	Substations	OHL
Total Transelectrica	3,980,544	3,205,655	7,123,765	520,529,940

b) Sources of soil, underground and terrestrial water pollution

No noxious substances are discharged on ground, in underground or terrestrial waters during normal operations of RET installations. Accidental leaks can occur because of untighten / broken equipment containing dangerous substances or from electro insulating oil or defects occurring to the oil regeneration / supply / disposal installations or from equipment.

Oil / fuel leaks can also occur from outfits and transport means during execution of construction and maintenance operations (the oil leaking into the environment was retained using absorbent biodegradable earth).

c) Air pollution sources

During construction, maintenance and normal operation of RET installations no significant amounts of pollutants are discharged in the atmosphere. The following atmospheric emissions can result from the construction, maintenance and normal operation of RET installations: suspended powders - during construction; flue gas from motor cars, electric generating sets and thermal power plants; ozone in negligible amounts (Corona effect), sulphur hexafluoride because of untighten equipment or improper gas handling.

In case of fires or explosions flue gas can occur (SOx, COx, NOx, COV, suspended powders, etc.) and high voltage OHL generate atmospheric pollution by ozone and nitrogen oxides after the Corona discharges around active conductors, especially during rainfalls. The addition of such pollutant substances to the existing fund is not major and cannot lead to exceeding the legal threshold values, beyond which there is risk for human health.

d) Used water sources

Electricity transmission does not generate technically used water.

Used waters generated on the location of RET installations are as follows:

- Domestic used water from human activities, which is directly discharged into the city's drainage network or it is carried to an urban used water treatment station or is locally cleaned into treatment micro stations, being afterwards released on ground or into terrestrial water.
- Rainwater collected in the tanks of oil equipment and in the manholes of concreted platforms storing waste and equipment (they can contain oil from leaks), which is mechanically treated in water-oil separators and discharged into the city's drainage or it is emptied and carried to a urban used water treatment station or is released on ground or into terrestrial water observing the maximum admissible limits for pollutants discharged in the environment.

e) *Generating waste*

No waste results directly from electricity transmission activities. Waste comes from construction, maintenance and human activities. The amounts of waste are different from one year to another, depending on the amount of investment and maintenance operations.

Waste generated in 2018 was disposed of / capitalised by means of specific companies.

Generated waste (t)	Capitalised waste (t)	Waste disposed of (t)	Stored waste (t)	Waste management indicator: Waste disposed of, capitalised / generated waste
5115.76	1075.12	2834.02	1206.62	76.41%

f) *Electromagnetic field generated by RET installations*

Transformer / connection electric substations and the 220 kV and 400 kV overhead lines have low impact over their surroundings, which can be found only around RET installations. A great part of disturbing effects is caused by electric inductions (into metallic objects or structures not grounded) and by interference (radio interference) phenomena. Constructive solutions chosen for high voltage overhead lines and electric substations provide proper protection against effects caused by the exposure of living bodies to the electromagnetic field, and by diminished environmental impact of such installations. In accordance with specific studies carried out near the 220 kV and 400 kV overhead lines, the intensity of the electric field decreases with distance, so at about 25 – 30 m from the line axis the field intensity is zero.

In 2018 measurements showed the values required by applicable norms were not exceeded in substations and upon crossing roads, railroads and intensely circulated areas.

g) *Noise pollution*

Noise can be generated during construction stages because of work execution and the operation of equipment and motor cars. During operation acoustic pollution is caused by the noise produced in the operation and vibration of RET installations or by Corona discharges in the area around active conductors. The noise level generated by Corona effects 25 m away of the active conductor varies between 53 dB during rainfall and 33 dB in fine weather.

Similar to 2017, the maximum admitted noise level was not exceeded in 2018.

h) *Impact on fauna*

The impact on fauna is significant especially over birds, which can collide with RET installations or be electrocuted by them within the migration corridors or protected areas. The main migratory corridors of various bird types were identified in Banat, Dobrogea and Danube Delta regions.

The following measures have been taken to protect birds in OHL areas:

- Bird repellent equipment was installed on towers;
- Anti-bird spirals were installed on OHL conductors within migratory corridors and coloured boards usually imitating predatory birds.

i) Impact on vegetation

The impact on vegetation is determined by final or temporary land occupation and by removal of vegetation exceeding a certain height within the safety areas of RET installations in order to prevent fires. Such impact can be significant only in the protected zones.

j) Species found in the IUCN red list and in the national conservation list with habitats in the regions impacted by operations and measures taken to preserve their habitats

To preserve the Danube hawk, endangered species, artificial nests were installed on high voltage towers as follows:

- In TB Timisoara: 34 nests
- In TB Bucharest: 4 nests
- In TB Constanta: 12 nests

Artificial nests are metallic or wooden boxes located on high voltage towers because the Danube haw prefers nests providing good visibility over the area and nearby feeding places. Nests should be located on artificial supports such as high voltage towers, since there are no high solitary trees on agricultural lands (historical nesting places).

The installation of artificial nests belongs to the project „Danube hawk preservation in north-eastern Bulgaria, Hungary, Romania and Slovakia", a multinational project of European financing, as there is EU-level awareness of the significant need to protect and preserve the species.

Actions and measures applied to prevent and/or limit the environmental impact (306-3)

Elaborating the documentation

- Elaborating the documentations and submitting the files for licensing / relicensing of objectives managed by the Company in terms of environmental protection and water management

Executing work of

- Construction or maintenance of drainage networks for domestic used water and / or rainwater;
- Installing water-oil separators in the tanks of oil-containing equipment and to storage platforms;
- Building concreted platforms for temporary storage of equipment and waste;
- Maintenance to oil- or SF6-containing equipment in order to prevent leaks;
- Painting the towers of overhead lines (OHL) using colours fit for the landscape;
- Clearing / maintaining the safety corridors of OHL-s;
- Remaking / arranging the land to restore it to the initial state (when work is completed).

Achiziţii servicii privind

- Monitoring the quality of used water from Company substations and offices and proposing solutions to reduce pollution according to the requirements from environmental and water management permits;
- Monitoring the atmospheric pollutant emissions (noise, electric and magnetic field, pollutant emissions, ozone consentrations); the values obtained for important parameters have been analysed and interpreted, resulting conclusions about the levels of pollutant emissions and compliance with limit values admitted by legislation;
- Collecting, sorting, transporting and capitalising / disposing of waste;

Environmental management plan

- Elaborating the environmental management plans for maintenance, refurbishment / modernisation projects

Transelectrica aims at reducing the environmental impact of its installations by future activities, mainly by reducing the occupied land surfaces, reduced impact on fauna and flora or mitigating the intensity of the electromagnetic field on ground. Mention should be made in 2018 there have been no significant spills that impacted the environment.

Waste classification by types and disposal methods *(306-4)*

Capitalisation		Disposal	
Recycling	**Co-incineration**	**Incineration**	**Storage**
• Printer toner waste • Synthetic engine & transmission oils • Mineral non-chlorinated insulating oils and heat transmission oils • Paper and cardboard packaging • Plastic packaging • Wooden package • Glass package • Outdated unused tyres • Oil filters • Brake plates • Ferrous metals • Plastics • Glass • Component with no specification • Other non-specified waste, car maintenance • Equipment containing dangerous components, dismantled • Waste of electric and electronic equipment, dismantled (DEEE) • Components disassembled from dismantled equipment • Lead batteries • Alkaline batteries • Battery storage • Plastics • Copper, bronze, brass • Aluminium • Iron and steel • Ol-Al (cables) • Metallic mixtures (cast iron) • Plastics and rubber materials • Paper and cardboard • Textiles • Fluorescent tubes and other mercury-containing waste • Electric and electronic equipment, dismantled • Wood • Plastics • Metals	• Tiles and ceramic materials (porcelain insulators) • Wood	• Mineral non-chlorinated insulating oils and heat transmission oils • Sharp objects • Medical infectious-prickly waste • Chemicals consisting of or containing dangerous substances • Pills • Plastics and rubber • Other engine, transmission and lubricating oils • Sludge from oil-water separators • Oily water from oil-water separators • Protection clothing	• Tiles and ceramic materials (porcelain insulators) • Earth and rubble • Waste mixture from construction and demolition • Plastics and rubber • Fluorescent tubes and other mercury-containing waste • Mixed municipal waste • Mud of septic tanks • Outdated tyres • Oil filters • Brake plates • Concrete

Exceeding the admitted limits from environmental regulations and solutions to such circumstances *(307-1, 308-2)*

As regards the cases when the admitted limits of applicable regulations were exceeded mention should be made of three situations solved as follows:

1. In electric substations Dumbrava, Roman Nord, Suceava, Munteni and Focsani Vest the ammonium indicator was exceeded in the domestic water dischargeable basins because of the excessive summer heat that led to evaporating the liquid stage.
Solution: Financial resources will be allocated to procure bioactivators and correct the chemical composition of domestic water.

2. Temporary storage up to capitalisation of used oil resulting from maintenance operations performed by SMART in electric substations Smardan, Barbosi and Filesti belonging to CE Galati.
   Solution: All legal steps were taken in order to comply with the measures provided in applicable regulations.

3. In electric substations Filesti, Barbosi, Tariverde and Stupina the total phosphorus indicator was exceeded in used rainwater.
   Solution: The cause of such exceeding of total phosphorus will be investigated and required measures will be applied, if need be, then new water samples will be taken to check the compliance with maximum admitted parameters.

Future measures to diminish locally identified issues (203-2)

Environmental protection

Our environmental policy takes over the commitment to carry out our specific activities in responsible manner, paying proper attention to the environmental impact and sustainable performance by means of:

Transelectrica in its capacity of transmission system operator deems it has major responsibility to future generations and permanently endeavours to find economic sustainable solutions in view of developing and upgrading its installations in accordance with the European Union's environmental protection requirements.

- Rational use of natural resources
- Reducing and measuring the environmental pollutant emissions
- Proper waste management as resulting from maintenance and refurbishment
- Periodical monitoring of environmental factors (water, air, soil, noise, electromagnetic field, waste)
- Upgrade and refurbishment of installations using best-in-class techniques, with which environmental pollution is prevented or reduced
- Providing knowledge and compliance with the environmental legislation by all company employees by information, training and motivation

Education

Our position with respect to corporative social responsibility is oriented towards educational support in order to enhance its quality, both in terms of technical domains specific to the Company and in terms of support domains. To shoulder such ideas we will get further actively involved in increasing the quality of education in the domain specific to Transelectrica's activities.

Health

Employees' health and of people around is a priority to Transelectrica, this is the reason why next year we will further assist specific associations that submit eligible projects with a view to improve Romania's health system.

Corporative volunteering

In Romania an ever increasing number of employees consider as important the social and ethical values of the company they work with. Therefore employees are important public for Transelectrica's strategy of social corporative responsibility. Corporate volunteering is the most relevant form of team-building, as a result of employees' growing involvement in organised activities, the Company's purpose being to promote such activity as much as possible in the future.

Social corporative responsibility

Social corporative responsibility policy (103-1, 103-2, 103-3)

Transelectrica further participates to developing the society it operates in, this being of major importance for the Company's fundamental values. By social responsibility projects the Company takes into consideration both the company's interests and those of employees, shareholders, the community and the environment.

The main Company objectives in terms of social corporative responsibility are:

- Investment into young people's education and development;
- Sustaining the humanitarian initiatives of non-governmental organisations;
- Participating to the development of culture and communities;
- Supporting the employees in case of major health issues;
- Involving the employees in corporative volunteer programmes;
- Investing into environmental protection.

Analysis of community needs *(203-2, 413-1)*

In terms of community needs some of the more important problems Romania is currently faced are found in social domain (poverty and social inclusion of disadvantaged groups) or economic one (unemployment, little revenue), but also in complementary domains such as quality and access to education, health, electricity, drinking water.

We will be permanently concerned with the situation of local communities and we deem we should contribute constantly by means of efficient solutions and actions.

Involvement into society *(413-1)*

To support developing a sustainable and performant Romanian society Transelectrica gets involved in the communities where it performs while at the same time endeavouring to get even closer to the needs of people outside the Company's sphere of influence.

In 2018 we supported the Technical Colleges of Bucharest, Timisoara, Craiova, Cluj-Napoca and the Dimitrie Gusti Technologic High School of Bucharest; the Association of the National Romanian Committed of CIGRE; the Association of Educational Robotics and WRO Science; Clean Hospitals Association; Mia's Children Association or Romania's National Red Cross Society.

In the second consecutive year the executive management of Transelectrica encouraged the employees participation as volunteers, joining the "Shoebox – A gift in a shoebox" project.

In terms of performance the Company managed transposing 88.15% of the budget allocated to 2018 to social corporative responsibility projects, compared to 73.71% in 2017. The 2019 target is to have this indicator exceeding 90%.

Projects Transelectrica got involved into during 2018

- ***Education and training***

Supporting the students from technical Colleges and High Schools in Romania

The Company gets actively involved in activities supporting young people studying in the energy domain in view of their educational and professional progress. Along the years we cooperated with educational institutions of the energy domain by equipping the research laboratories and providing stipends to students with particular results.

In 2018 the Company supported the Technical Colleges of Bucharest, Timisoara, Craiova, Cluj-Napoca and in the Dimitrie Gusti High School of Bucharest in view of optimising didactic activities and motivating students for technical academic education. The main activities were: upgrading technical laboratories with new equipment and organising scientific competitions.

Association of the Romanian National Committee of CIGRE

Transelectrica helped completing the budget necessary to the "Next Generation of Energy" projects consisting of rewarding research papers presented by students / master attendants / doctor candidates from energy universities under the international RSEEC (Regional South East Europe Conference) 2018.

Association of Educational Robotics and WRO Science

The Company a sustained the robotics team SuperFly to participate with a competitive robot to WRO Friendship Invitational Tournament, as representative of Romania.

- ***Humanitarian actions***

Clean Hospitals Association

Many children celebrate their birthdays within the four walls of paediatric cancer wards, given the long intervals they spend in hospitals. The Day of good deeds project consisted in organising Children's Days for sick children in

the Fundeni Clinic Institute, Oncologic Institute Bucharest and Marie Curie.

Mia's Children Association

We have been partners in the "Health and responsibility" project consisting in sickness detection (hepatitis, TBC, diabetes, HIV/AIDS, psychic illness) and proper treatment, the need to check and improve the beneficiaries' health by specific tests (treatments, monitoring). Mia's Children provides daily tutorship and care, counselling for instructive-educational, artistic, sportive, creative activities and socialising 45 children and young people from disadvantaged groups found under major social risk.

National Red Cross Society of Romania

We supported about 200 victims of floods occurred in June 2018 by rebuilding houses and residential attenances, namely by distributing food items and higienic-sanitary products to needy families in Tulcea and Neamt Counties.

- ***Supporting the Romanian sports***

Municipal Handball Club of Ramnicu Valcea

In 2018 we added to our portfolio the support to Romanian performance sports, being next to those who train daily in order to play best and provide us with joy and show at each game.

We have encouraged the feminine handball team HCM Ramnicu Valcea to participate in the National Handball League and to the EHF cup, 2018/2019 season.

- ***Corporative volunteering***

SHOEBOX Campaign – A gift in a shoebox

Another year in a row Transelectrica encouraged its employees to participate into the volunteer Shoebox project – A gift in a shoebox. Taking into account the success of the 2017 campaign and the great employee involvement, we decided to further provide joy and smiles to children with poor financial possibilities. 136 presents were collected after the humanitarian campaign, which reached the disadvantaged children of primary schools and blind institutions.

We intend to participate each year in this project and determine both the employees and our families and friends to join and help the needy children.

Energy efficiency (102-15, 103-1, 103-2, 103-3, 302-1, 302-4)

Romania has been European Union Member since 1 January 2007 and during pre-adhesion she committed reviewing and tailoring the legislative provisions to increase energy efficiency, including by development and refurbishment of the electricity transmission network.

Transelectrica elaborates the "Energy efficiency improvement programme"

Regulations were devised so as to address distinctly to the industrial sector (economic agents thereof), tertiary sector (economic agents, public institutions, non-governmental organisations etc.) and residential sector (population). The purpose of the energy efficiency regulation is to promote and stimulate approaches and mechanisms such as:

- Energy management at the consumer's;
- Developing energy efficient technologies;
- Promoting new renewable energy sources;
- Developing and diversifying the energy efficiency services;
- Professional training and education in energy conservation domain;
- Promovarea programelor de cooperare internaţională pentru eficienţă energetică.

Energy efficiency activities of Transelectrica rely on the requirements of internal legislation in accordance with applicable European legislation, namely:

- Directive 2012/27/UE of the European Parliament and Council of 25 October 2012 regarding energy efficiency;
- Law 121 of 18 July 2014 on energy efficiency;
- Law 372/2005 with respect to the energy performance of buildings;

Approaching energy efficiency in Transelectrica takes into account four important lines, namely:

- Reducing one's own technological consumption in the electricity transmission network,
- Reducing the electricity consumption supplying auxiliary services of electric substations,
- Reducing heat consumption of buildings,
- Other measures (electric mobility, smart grid, digital substation);

Taking into account Transelectrica is in the industrial consumer category with over 1000 toe (tons of oil equivalents); legal requirements establish certain obligations for the Company such as:

- Allocating the Energy Manager responsibility to a specialist licensed by ANRE;
- Elaborating last year's Consumption statement and Energy analysis questionnaire;
- Elaborating last year's Energy efficiency report;
- Annual elaboration of the Energy efficiency improvement programme;

Current energy efficiency activities

- Performing energy audits both with respect to technologies and to buildings,
- Optimising electricity and heat consumption values in Transelectrica buildings,
- Updating the specific requirements to upgrade transmission network assets in accordance with the targets of higher energy efficiency,
- Using ENTSO-E's (cost-benefit) methodology to validate investment projects, including by means of energy efficiency indicators;

New technologies

The Union's Energy Strategy aims at greater utilisation of renewable electricity sources in the power mix, which should consolidate clients' positions and place households and enterprises in the central focus for the European energy market. ENTSO-E's roadmap proposes using the latest technologies for such challenges.

Mention can be made of the following utilisations of new technologies:

I. Digitalisation,
II. Standardisation and data exchange,
III. Integrating storage systems,
IV. Increased utilisation efficiency of the Electricity Transmission Network;

There is an obvious need for Transelectrica to expedite technological innovation. Developing new technologies for network equipment and for modelling methods will enable the Company to carry out its mission in an evolving power system. Such mission is shared by the Regulatory authority in the energy domain that encourages network operators to search for innovating solutions.

The Company focuses more on technological integration than on innovation or on producing new technologies in it.

At the same time the strategy provides smart grid development requires significant effort in order to implement a great number of "*smart initiatives*".

In accordance with the programmes performed that were initiated these last years, we can find among Transelectrica's projects developing new technologies:

1. Implementing technologies for network monitoring and control, as well as of its components;
2. Installing sensors and developing a smart infrastructure in order to monitor the condition of critical assets;
3. Implementing security solutions with respect to confidentiality, availability and information integrity;
4. Non-destructive systems of investigation to inaccessible elements of OHL towers (underground guys); this is a highly useful solution given the difficult outage conditions and the situations occurring upon large excavations;
5. Anti-bird protection systems according to the Environmental Guard's demands; these are measures meant to protect the birds having their habitat near high voltage lines;
6. Systems mitigating the OHL galloping processes by means of pendulum type elements; the solution has already proven highly efficient in maintaining the lines' mechanical steady state;
7. Determining and using the transmission capacity established in dynamic manner; a solution to operate the network as efficiently as

possible relies on the dynamic assessment of lines using several available metering and forecast techniques; the associated data acquisition is frequently combined with meteorological measurements; the line conductor's model can be calibrated and used subsequently in order to get the variable limits of the transmission capacity taking into account environmental cooling or heating as major input factor; mention should be made this solution is not a network substitute but complementary method to operate better the existing infrastructure;

European projects which Transelectrica is a partner of

European research project CROSSBOW

CROSSBOW (Interconnection management of renewable energy and storage units in a trans-national wholesale market) is one of the greatest research-innovation projects financed by the European Commission under Orizont 2020 Programme, part of H2020-LCE-2016-2017 topics (COMPETITIVE LOW-CARBON ENERGY), within the LCE-04-2017 topic - „Demonstrating the integration in a system of smart transmission grid technologies and storage technologies, in the context of higher share of renewable energy sources".

The project consortium has 24 partners (of 13 countries): 8 Transmission System Operators in S-E Europe area, 1 Distribution Operator, 1 Regional Security Centre, 2 large generators, 5 Universities, 6 industrial partners and an Association.

The project began in November 2017 and is now in the technological development stage after having defined the "requirements" and "use cases".

Transelectrica is one of the largest TSO-s of the 8 involved ones with one of the most mature markets, having an important part in the project in terms of network and geographical location.

At the end of the 48 months the project aims at developing and finding solutions for a more efficient utilisation of interconnection lines, of generators from renewable sources and of storage units distributed in the entire Balkan region (SEE Region), by developing 9 products. These will represent new options for the current and future players on the energy market.

Transelectrica will participate to most work packages organised contributing widely to this project which important results are expected of, for what electric power systems will become in the next decade.

ReServe European research project

European electricity systems are actively involved in the search for solutions, taking into account the ever intensive utilisation of renewable energy resources to carry out environmental objectives assumed at community level.

The European Commission's research-innovation plan launched the RES (Renewable Energy Source) integration topic in the energy system (H2020-LCE-2016-2017 programme, LCE-07-2016-2017 topic - Developing future generation technologies for renewable electricity and for the cooling/heating systems), with 5 million EURO budget. The RESERVE project aims at examining new concepts in terms of steady-state electric power systems. Future power systems will use renewable energy sources in order to minimise CO2

emissions. At present large generators supplied from fossil-fired turbines maintain the stability and quality of energy supply by their mechanical inertia. The inertia of such generator-turbine units provides the suppliers with significant window in time and thus they can respond to network events. In the future they should find urgent solutions for the steady-state operation of power systems even upon 100% RES utilisation (circumstances when inertia is often lost because of static energy converters).

RESERVE will approach this challenge by investigating new power system concepts, implemented as a new system service system, which should enable distributed and multi-level control of the power system using the pan-European network codes system.

The RESERVE project has drawn the attention of valuators from the European Commission given the seasonal topic approached, a subject matter where Transelectrica's contribution is considered highly important, being the only transmission system involved in this project that can provide significant values (metered from PMU equipment and electricity metering profiles by one minute intervals). Consequently the Company was invited to be a part of the project consortium. The project was assessed with 14 points of maximum 15, thus obtaining full financing by European funds.

The project initiated in October 2016 has a term of three years and is coordinated by Ericsson GmbH (DE), while consortium members are: TRANSELECTRICA (RO), Romanian Energy Centre (RO), ESB Networks (IE), Flexible Elektrische Netze FEN GmbH (DE), Gridhound UG (DE), Rheinisch-Westfaelische Technische Hochschschule Aachen (DE), Polytechnic University of Bucharest (RO), University College Dublin (IE), Politecnico di Torino(IT), Waterford Institute of Technology (IE).

FUTURE FLOW European research project

Transelectrica is involved in the consortium of the "FutureFlow" project, coordinated by the Transmission System Operator of Slovenia (ELES) under the European Commission-financed programme with respect to implementing a competitive pan European market, while also achieving the community targets of emission reduction, Horizon 2020 – "Call for competitive low-carbon energy" in the "Transmission grid and wholesale market" section.

The project has a budget of about 14 million EURO and 4 years' implementation term, aiming at approaching a series of issues in the context of new network codes, such as balancing power systems and establishing new regional markets for system services.

The FutureFlow project approaches the application of secondary frequency control from generation to consumption and will provide international performance for such activity specific to power systems. Taking this objective into account the FutureFlow partners are searching for new solutions of power system balancing and flow management in the European electricity network. "Modern" consumers approached by FutureFlow will be able to increase or reduce their consumption in a matter of a few seconds and thus provide control functions, which nowadays are mainly performed by traditional hydro and thermal power plants.

The project is addressed to Transmission System Operators, to traders on the electricity market and to the producers of industrial and communication components for the electricity domain.

The consortium includes also several companies as well as European network operators, of which:

- Slovenia: ELES - Transmission system operator, Elektro Energija (Retailer and VPP operator), EIMV (Research-development and design institute), GEN-I (Retailer);
- Austria: APG - Transmission system operator, CyberGRID (ICT company) and Verbund (Retailer and VPP operator);
- Germany: SAP (ICT company);
- France: Gemalto (ICT company);
- Denmark: Landis&Gyr (ICT company);
- Hungary: MAVIR – Transmission system operator;
- Serbia: EKC (ICT and consultancy company);

We can mention from the project achievements to date:

- Balancing markets study to four Transmission System Operators in terms of control potential, and technical characteristics of controllable consumers (Demand Response – DR) and of distributed generators (Distributed Generation – DG); Study on market adaptation to participate into secondary control of large wind parks and the impact of forecast errors on the electricity output from wind sources on the secondary control market;
- Elaborating the general architecture of the Future Flow (FF) platform in view of - automated joint activation of the secondary frequency control (aFRR) and detecting the connections and impacts on redispatching; analysis of controllable consumers in load change for industrial, commercial consumers, industrial platforms with auto-generation but also renewable sources with installed capacity above 1 MW;
- Identifying the reserves and participating entities, the processes to be elaborated, the requirement of data to be exchanged with secondary control (aFRR) and the redispatching capabilities;
- Identifying the interaction requirements between aFRR aggregation platforms and analysis of cybersecurity concepts in data transmission;

Other projects

Besides the fore-mentioned projects Transelectrica is also involved in a new project adjudicated by the EC, namely the INTERRFACE European research project, beginning in January 2019. At the same time Transelectrica is part in other project applications such as GEAR UP and PHOENIX.

Research and innovation

Current and future challenges for transmission system operators (OTS) (302-4)

The relevant technological trends that will create together a new reality in the power systems are presented in the following figure:

Digitalisation

Will lead to more data, faster and more valuable, to higher computation capability and better connectivity of all assets in a power system. This will optimise asset design, planning and operation in the domain of wind, solar energy, in the domain of electricity transmission, distribution and use in the society.

Solar energy

The development of photovoltaic generating techologies will reduce up to 40% the costs of solar energy in the next ten year, while the module price will drop more than 20% at each doubling of capacity. By 2025, photovoltaic technology will be the cheapest form of electricity generation in many regions of the world.

Energy storage

For its better management in the context of technological development

Bidirectional communication

For a better involvement of end customers into improving the quality of services they benefit of;

Smart electric grids

Smart grid electricity networks will begin self-management and will include characteristics enabling self-configuration in order to manage security, safety and reduce losses; self-regulation to approach voltage variations and auto-optimisation to damp disturbances. New modelling techniques will be developed to design, test and verify the electricity network management.

Main challenges for the operators of electricity transmission systems in terms of research and innovation:

Use of data extraction and HPC techniques (High Performance Computing)	• developing the sector specific to information technology in the entire society and in economy will also influence power systems. Passing from a "*copper-based supply system*" to a system integrating more information technology, data management and data nodes which sustains cybersecurity is of essential importance.
Using new materials and technologies	• efforts should be furthered in order to use new materials, concepts, standards, instruments and algorithms that will process more and more information to approach the issue of power systems security and stability.
Developing new methodologies and instruments to operate the network closer to its physical limits without endangering its security	• in order to better manage the network, closer to its physical limits
Greater use of renewable resources	• to increase network resilience
Developments in other sectors	• such as storage batteries that brought about new solutions / challenges in the power system and the need to extend the range of options that contribute to system services
Digitalisation of the power system	• digitalising the power system and the cybersecurity issues related to such developments; client's more active participation on the energy market represents new challenges that the power system should respond to by investments into research and innovation
Maintaining system security and steady-state	• OTS-s should develop expert systems and support instruments for decision-making in order to anticipate possible emergency situations, to provide early warning to system operators and to suggest possible solutions with their real time success likelihood

Objectives of the Research and Innovation Strategy (302-4)

The research and innovation strategy consolidates the Company's vision with respect to upgrading the transmission network, providing the support necessary to implement priorities included in the Development plan, Administration plan and Management plan, sustaining the implementation of digitalisation.

The main paths provided in the Strategy of CNTEE Transelectrica SA in the research and innovation" domain are:

I. Innovation is a success condition to meet the achievement of the Company's mission and vision;
II. Innovation will be promoted as priority for the Company's basic activities as it brings plus value by means of process digitalization, service improvement and by increasing personnel competences;
III. Innovating solutions, technologies, systems and concepts as necessary for key activities will be generally implemented into the Company as follows:
   - Testing and validating them under „ *pilot project types*";
   - Or their critical valuation in projects already completed in other organisations;
IV. Innovation will be the engine enabling the Company to implement the „*Learning Organisation*" concepts;
V. Research and innovation will support the major objective „*Digitalisation*";
VI. Research in the Company will focus on developing the following pillars:
   - National and international partnerships in fundamental and technological research (observing the basic principles, formulating concepts on technologies, experimental demonstration of concepts, validating the technologies in laboratories);
   - Partnerships with the suppliers of solutions and equipment for product / technology demonstration (validating the technologies in relevant and in operational environments);
   - Partnerships under competitive procedures (to deliver and commission products and solutions);
VII. Personnel participation to events with important innovation & research component both in national and international context (e.g. ENTSO-E, CIGRE, congresses, round tables, symposiums etc.) will also include knowledge sharing, spreading best practices within the Company in integrated regulated mode;
VIII. The general and specific objectives will be structured according to the methodology promoted in ENTSO-E's research & innovation strategy;
IX. The Company's research and innovation strategy will observe the centralised organisation model (steering committee, strategy administrator, process procedures, well defined roles and objective-centred management);
X. Research and innovation work will be financed as a priority both from one's own sources and from others, reaching to the level of the most consistent group of European network operators (e.g. non-reimbursable financing programmes, subsidies, grants, partnerships etc.).

The objectives included in the "Research and innovation strategy" add value in the following domains:

- The Company's strategic vision;
- Asset management;

- Improving the performance indicators (KPI);
- Developing the capabilities essential for network operation;
- Capitalising the opportunities to improve the Company's performance;
- Developing the competence of Company personnel;
- Maintenance and operation activities;
- Developing partnerships with the providers of technologies and solutions;

The research & innovation strategy also operationalising the vision of all stakeholders, meaning the implementation of a flexible infrastructure open to interoperability under a digital portfolio where the traditional processes, especially the manual ones are removed or digitalised so that the information can be accessible in real time.

The digital transformation of the energy industry will generate new challenges for management teams, operational specialists and Company partners. The Company complies with all conditions in order to become a "Learning organisation" if it fully uses the potential of new technologies in view of the digital transformation.

To sustain such objectives in 2018 the Programme on the Implementation of Digital Transformation (2018-2027) was approved.

The actions and activities included in the digital transformation) initiatives aim at increasing Company performance by means of:

- Innovation in operational and managerial processes;
- Innovation by introducing digital technologies;
- Innovation by introducing new concepts that will change the Company's business model;
- Developing the Company's strategic capabilities (e.g. personnel, strategic assets, structure, processes etc.).

The strategy sustains network digitalisation is clear opportunity for the efficient development and management of the power system, with proven profitability as regards improved service quality and better operational costs.

Asset management challenges for Transmission System Operators (TSO)

Transelectrica's smart grid policy assumes objectives and targets for the following 10 and sustains Transelectrica's asset management strategy.

From the smart grid perspective asset management will enable important developments in the following domains:

• **Network planning** (new asset management methods will enable efficient network planning by expanding the infrastructure that allows monitoring the condition of network assets, thus enabling a better maintenance and development programmes);

• **Network operation** (dynamic asset management instruments will enable additional proactive measures to improve network security and resilience. Asset condition monitoring will enable operators to use the full asset capacity, enhancing network flexibility and continuity);

• **Socio-economic impact** (asset management innovation can improve network development by balancing various risk aspects related to systems operation and can contribute to reducing system defects);

The Technical Policy Regarding Asset Digitalisation under Transelectrica's Upgrade Initiatives will operationalise the concepts.

This document will be used and applied by the Company's organisational entities and by design service providers:

- In case of implementing Company projects to develop RET assets that promote:
  - ✓ Fully the digital substation concept;
  - ✓ Partially the digital substation concept (concepts sustaining the Company's digital transformation processes);
- In case design documentations are elaborated by:
  - ✓ The Company;
  - ✓ The design service provider;
  - ✓ Work contractor:

The pilot project that will test the innovating concepts and technologies proposed under strategic documents approved Company-wide is the refurbishment of the 220/110/20 kV substation Alba Iulia, which will be 100% digital.

Benefits of applying Smart Grid concepts and standards (302-5)

The benefits of applying smart grid concepts and standards to sustain performing asset management:

- Improving the financial performance;
- Well consolidated decisions regarding investments and asset maintenance;
- Managing the risks associated to the operation of power systems;
- Improved services and results;
- Higher operational efficiency and effectiveness (excellence);
- Extending the lifetime of assets;

Periodical preventive maintenance operations based on reliability of network assets will support the network operators' decisions to improve the general flexibility of power systems contributing to higher integration of energy sources.

To improve risk management in transmission networks one should implement predictive maintenance policies based on more accurate estimations for assets lifecycles.

Real time monitoring of power flows within networks and the condition of network assets can significantly contribute to asset management decisions (maintenance, upgrade and replacement).

About this report (102-3, 102-48, 102-49, 102-50, 102-51, 102-52, 102-53, 102-54, 102-55)

Transelectrica publishes the second sustainability report thus furthering the path initiated in 2018, using the previous experience to provide indicators more and more relevant to stakeholders.

This report has been elaborated in accordance with the Global Reporting Initiative Standards (GRI Standards – Core option) and covers the reporting period 1 January 2018 – 31 December 2018.

The information comprised in Transelectrica's Sustainability Report does not dwell exhaustively on the Company's non-financial aspects, but they rely on what stakeholders told us are domains of interest. If the 2017 report published in April last year was just an introduction in Transelectrica's activities, this report brings about, besides the updated information on past indictors, new issues that place the Company in line with the institutions paying more attention to globally important areas – environmental protection, employees' protection and welfare, reduced gender inequalities or promoting sustainable activities.

We have further selected this reporting standard in order to make certain stakeholders receive relevant information in accordance with international trends, without limitation to compulsory reporting subjects from applicable legislation.

Continuing the practice of reporting Transelectrica intends publishing annually non-financial information.

The contact point for questions or any kind of information is the central office of Str. Olteni 2-4, Bucharest 3, Department of Non-financial Reporting and Corporative Responsibility of Transelectrica.

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GLOSSARY

AGA – Shareholders' General Assembly
ANRE – National Regulatory Authority in the Energy domain
BVB – Bucharest Stock Exchange
CE – European Commission
CPT – one's own technological consumption (losses)
CRE – Romanian Energy Centre
dB – decibels
EGRC – Risk management team of the Company
ENTSO-E – European Network of Transmission System Operators for Electricity
GRI – Global Reporting Initiative
GWh – Gigawatt hour
KPI – Key performance indicators
kV – Kilo-volt
LEA – Overhead lines (OHL)
MW – Megawatt
OTS – Transmission System Operator
RET – Electricity Transmission Network
SEN – National Power System
SNA – National Anticorruption Strategy
TWh – Terawatt hour
UNO-DEN – Operational Unit of the National Power Dispatcher