Transelectrica®

Societate Administrată în Sistem Dualist

Raportul de Sustenabilitate al Transelectrica 2019

WE LEAD THE POWER

www.transelectrica.ro

Statement of responsible persons

The information provided in the Transelectrica's Sustainability Report of 2019 elaborated in accordance with the Global Reporting Initiative standard, while observing the provisions of European Directive 2014/95/UE transposed in the Romanian legislation by Order 1938 of 17 August 2016 of the Ministry of Public Finance provides fair accurate image consistent with true facts of the non-financial aspects, part of ongoing business, which impacts the Company's development and sustainability.

Directorate
Chairman
Catalin NITU

Member	Member	Member	Member
Ionut Bogdan	Andreea Mihaela	Adrian	Corneliu Bogdan
GRECIA	MIU	MOISE	MARCU

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Message from the Directorate (102-14)

Our performance with respect to sustainability

Dear shareholders, investors and partners,

These last years we have performed in a dynamic environment, providing constant challenges that have permanently changed the sector. During all this time we have assumed our responsibility towards the National Power System (SEN), but also to the Company's partners, employees, environment and community.

In the capacity of transmission and system operator for electricity and of strategic company nation-wide and in the region, this is the third consecutive year we are issuing the Company's Sustainability Report, which is also an opportunity to reconfirm our commitment to sustainability and durability.

2019 was marked by activities targeting improved economic, social and environmental performance. To this effect we expedited investments to increase the operational safety of the National Power System and the electricity supply of consumers by refurbishing transformer substations and making capital repairs to overhead lines. In 2019 we managed to draw European finance for strategic projects, which proves the sustainability of our Company's investments.

Our efforts were recognised and enabled us obtaining again rating Ba1 with positive outlook from Moody's rating agency. Moreover we have managed placing the Company among the most responsible ones in the country, according to Romania CSR Index 2019, where we got the Bronze Level Recognition.

The report you are about to read provides several details about the non-financial performance of Transelectrica, to enable you better understand the impact of our activities on the economy, society at large and the environment, as well as the commitments we assumed in order to keep up on the responsibility road.

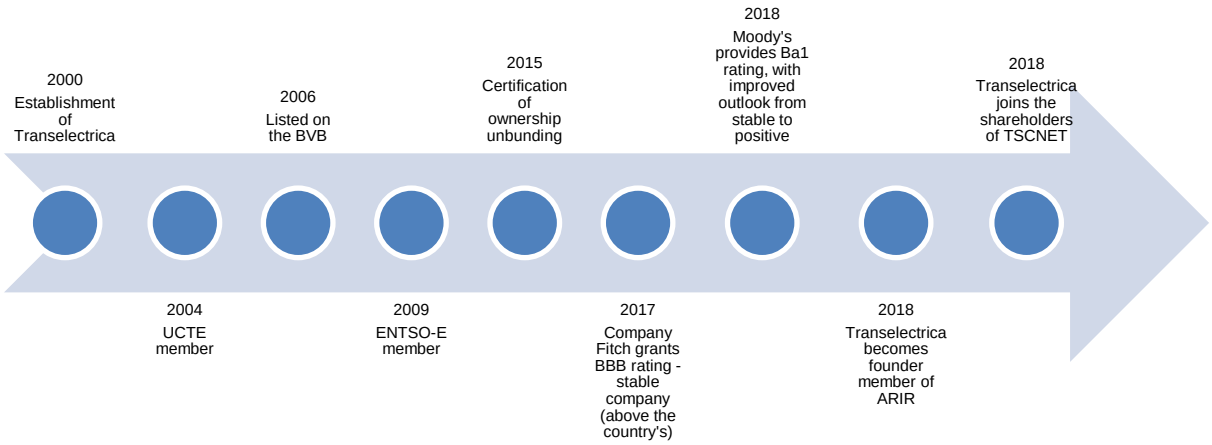
This is the result of assumed corporate governance principles, transparency and communication but also the outcome of the Company's active involvement in corporate social responsibility with respect to communities, employees and the environment.

We have been growing together for more than 20 years and, like always, we would like to stay a reliable partner for all our stakeholders.

Directorate of Transelectrica

Chairman	Member	Member	Member	Member
Catalin NITU	Ionut-Bogdan GRECIA	Andreea Mihaela MIU	Adrian MOISE	Corneliu Bogdan MARCU

Company presentation



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

In the value chain of electricity activities Transelectrica has the central role of transmission and system operator, a regulated natural monopoly with mission to provide public electricity transmission services while also maintaining the safe operation of the national power system, under non-discriminatory access terms for all users.

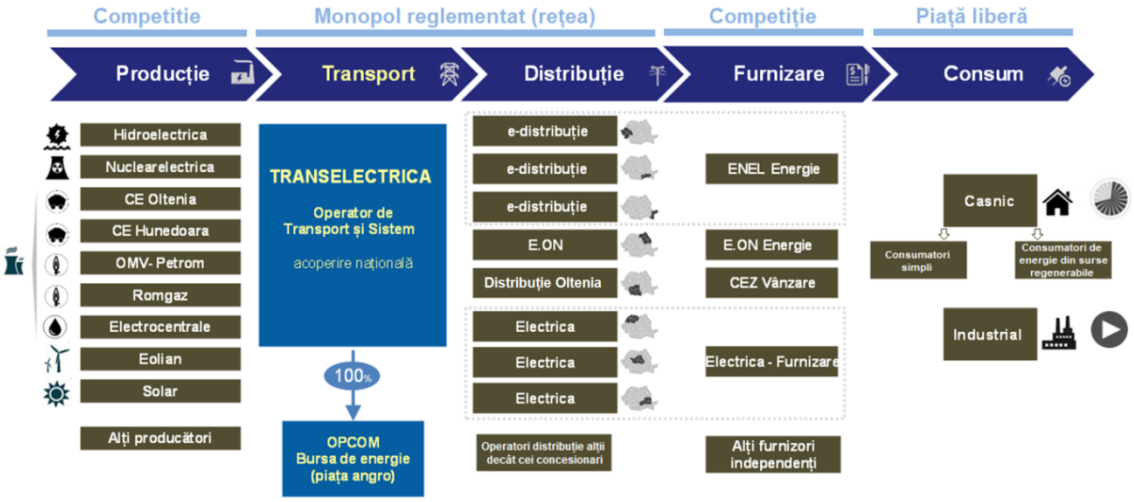
A strategic Company in national and regional context, Transelectrica also performs as balancing market operator, metering operator and the operator providing allocation of capacities on interconnection lines.

The business model corresponds to the standard profile of a Transmission and System Operator (TSO), a uniform model Europe-wide through the European energy strategy and legislation, applied in all community countries and transposed as such in the national legal framework.

A strategic Company in the energy domain, Transelectrica has passed from national dimensions to a pan-European approach of its activities

All over Europe the energy sector is undergoing a deep transformation.

Emphasis is laid on the transition from the predominantly national development of the energy sector to a European integrated and coordinated evolution which should provide consistent continental development but also enable tailoring to national specific features and pursuing the legitimate interests of member states.



As an integrant part of the European interconnected system Transelectrica is responsible not only for the operation of the Romanian power system under safe and qualitative parameters while supplying the national consumers, but also, next to the other Transmission and System Operators it has widened its competence and responsibility area in all Europe (36 countries with 532 million consumers).

Transelectrica, member of the European Transmission and System Operators' family

The Romanian power system has been integrated into the European electricity transmission system much before Romania's inclusion in the European Union.

As of October 2004 Transelectrica became partner of electricity transmission companies across Europe, as member in the UCTE, ETSO associations and, beginning with 2009, of ENTSO-E.

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

Transelectrica, member of TSCNET and JAO since 2018

In August 2018 Transelectrica became member of the Regional Security Coordination Centre TSCNET Services GmbH, joining its shareholders but also Europe's Joint Allocation Office JAO SA in December 2018.

TSCNET was established to serve the Transmission and System Operators from east-central-western Europe with a view to have a coordinated implementation of European network codes, while JAO coordinates the auctions 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 energy legislative package

European policies on energy and on environment, instrumented by successive legislative packages approved Europe-wide, lay emphasis on increased safety of electricity supply, higher energy efficiency,

decarbonising the generation mix by integrating renewable sources and implementing efficient storage solutions.

Being a part of the European family by its ENTSO-E membership, Transelectrica is also a valuable partner for the elaboration and negotiation of legislative packages applicable to the energy sector.

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

Thanks to its technical and operational expertise as Transmission and System Operator Transelectrica has been an active partner both in the elaboration of codes within ENTSO-E structures and during the negotiation stages in the European Commission and, by means of the competent ministry, at European Parliament level as well.

Transelectrica, strategic partner in the elaboration of the Plan to develop the electricity transmission network

Electricity transmission networks play a crucial role in reaching the European desiderata, especially with respect to the safe supply of consumers, establishment of the internal energy market and the integration of renewable sources.

Within ENTSO-E pan-European plans to develop the transmission infrastructure are integrated and coordinated (TYNDP: 10 years' European masterplan of the electricity network, which also included an assessment with respect to the adequacy of the pan-European electric power system), the main corridors are identified as well as priority projects (list of PCI projects) for which the Regulation (EU) 347/2013 provides stimulating mechanisms to expedite their implementation (competent authority responsible to facilitate and coordinate the procedure mandating projects of common interest, community financial assistance - e.g. the Connecting Europe Facility instrument).

Transelectrica, valuable partner in European projects

At the same time with negotiations to provide the regulatory framework for the energy domain the Transmission and System Operators carry out certain projects that aim at implementing the single European energy market, at applying the European network codes or investigating the specific aspects regarding challenges from the new legislative item: the Clean Energy Package.

The integration of the Romanian electricity market into the European one is a major objective for Romania, circumscribed to the strategic objective of establishing the internal European market (IEM), a priority goal for Europe, which requires coherent measures and conjugated efforts of all involved entities: competent Ministries, Regulatory Authorities, Transmission and System Operators, and Energy Exchanges.

Having operated since 2014 within the 4M MC coupled market (Romania, Hungary, Slovakia and the Czech Republic) Transelectrica has become a partner of projects developed in the east-central-western European zone (CORE region), being simultaneously active in the south-eastern European area (SEE region), enlarging its involvement and competence areas in all Europe.

At the same time with the market-coupling projects and the coordinated allocation of cross-border transmission capacities Transelectrica is also a

participant in the development projects operationalising some trans-European transaction platforms of balancing electricity.

Such platforms will contribute to optimising the balance of power systems Europe-wide, thus generating economic and social welfare and contributing to higher safety of electricity supply to European consumers.

Licences and certifications

Concession and Licence

Transelectrica holds under concession the goods belonging to the state's public domain, namely the national electricity transmission network (RET), being therefore a public utility company.

The concession over RET and the lands it stands on was granted for 49 years under concession contract 1/29.06.2004, concluded between the Ministry of Economy and Trade in capacity of grantor authority and Transelectrica, in capacity of concessionaire.

The activities of Transelectrica are regulated under the primary legislation (the national framework is Law 123/2012 while the European one is under Directive EC/72/2009 and Regulation 714/2009) as well as the secondary legislation issued by ANRE: which means licences, tariff-setting methodologies (revenue cap for transmission and cost plus for system operation, tariffs, framework contracts, procedures and others).

The Company performs activities as Romania's transmission and system operator according to Licence 161/2000 provided under Decision 865 / 22.12.2000 with later amendments and additions, issued by the president of the National Regulatory Authority in the Energy domain and to the specific Terms associated to the Licence, with a view to provide electricity transmission services, as well as electricity metering on the wholesale electricity market in capacity of metering operator (OMEPA), system services, organisation and administration of the balancing market, administration of the bonus type support scheme for electricity generated under high efficiency cogeneration, issuance of green certificates for electricity producers and other activities correlated with the above ones.

The Licence holder is the only provider of electricity transmission services for all users of the transmission grid, and provider of system services for 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 of the Electricity and natural gas law 123/2012, with later amendments and additions, the transmission and system operator (TSO) of the National Power System is certified by ANRE, according to a certification procedure completed by ANRE's issuance of a final decision for TSO certification.

In accordance with the final Endorsement 7053 of the European Commission / 12.10.2015 according to article 3 para (1) of Regulation (EC) 714/2009 and to article 10 from Directive 2009/72/EC, ANRE ascertained that Transelectrica has complied with the legal requirements regarding its certification as transmission and system operator of the National Power System, in compliance with

the ownership unbundling model, and the Regulatory Committee of ANRE approved the certification of the National Power Grid Company Transelectrica SA, in regard to which the ANRE Order 164/07.12.2015 was issued.

The certification conditions to be complied with by the transmission and system operator are provided in article 34 from Law 123/2012 and in accordance with ANRE Order 104/2014 approving the general conditions associated to the licence, Chapter III, Section 11, articles 46-49.

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

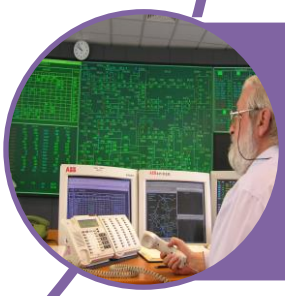
Mission

The provision of public electricity transmission and system services under sustainable conditions for all users of the electricity transmission grid under non-discriminatory conditions and with a view to maintain a safe operation of the national power system. Maintaining a key role on the Romanian electricity market and in the south-eastern European region, supporting the operation and integration of energy markets. Providing sustainable operation, maintenance, upgrade and development of the electricity transmission network with a view to maintain steady-state in the national power system, under economic efficiency and qualitative conditions.

Vision

Taking into account Transelectrica is found at a cross-road of east-central-western (CORE) and south-eastern (SEE) European regions, the Company aims at becoming an inter-regional integration factor, thus contributing to greater security and sustainability Europe-wide.

In terms of corporate management Transelectrica aims at being an integrant part of society at large, focussing on sound principles, promoting in its team responsible people and sustaining values to be developed in all its structures



Values

The values on which all activities stand are sustainability, integrity, professionalism, respect and social responsibility. Company-wide there is appreciation for diversity of opinion, regardless of hierarchies and we consider that an exchange of opinions can be a development drive.

Investment strategy and development plan

Transelectrica plans the development of the Electricity Transmission Grid (RET) taking into account the current stage and forecasted development of the consumption, generation fleet and electricity exchanges, and it elaborates every 2 years a Development Plan for the following 10 successive years, submitted to the approval of ANRE and of the grid owner's. In 2019 the RET Development Plan was elaborated for 2019-2028, including all the information updated for this period.

The RET development plan is a public document providing the main aspects with respect to the current situation 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 Strategy and Energy 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 during planning.

Being an integrant part of the European power system Transelectrica elaborates the RET Development Plan in correlation with the European Ten-Year Network Development Plan (TYNDP).

The Company's development strategies have been aligned in complement to the European ones. Thus major projects for the European network are developed in the electricity transmission grid operated by Transelectrica, which have been included in the list of projects of common interest (PCI).

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

Transmission and system operator with key role on the electricity market from Romania and the region, Transelectrica has got attributions such as administration and operation of Romania's electricity transmission system as well as providing electricity exchanges between Romania and the countries she is interconnected with in Central and Eastern Europe in its capacity of ENTSO-E member.

In accordance with the Licence terms Transelectrica performs the following regulated activities:

- Providing electricity transmission services as well as electricity metering on the specific wholesale electricity market, in capacity of metering operator;
- Providing system services by means of the dispatch management layers, using specific systems and installations;
- Organising and managing the balancing market in capacity of its administrator;

Beginning with 2006 Transelectrica is listed on the Bucharest Stock Exchange

Once being listed on the Bucharest Stock Exchange Transelectrica has laid the basis for a sustainable relationship with Company shareholders. The Company-issued shares are transacted on the regulated market managed by the Bucharest Stock Exchange, in Premium category, under TEL symbol.

- **Structure of Company shareholders on 31-12-2019***

SHAREHOLDER	SHARES	QUOTA (%)
Romanian State	43,020,309	58.688
DEDEMAN SRL	4,503.567	6.143
Privately managed Pension Fund NN/NN Pensii S.A.F.P.A.P S.A.	4,007,688	5.467
Other legal person shareholders	15,976,281	21.794
Other natural person shareholders	6,795,297	7.905
TOTAL	**73,303,142**	**100**

* The Shareholders' Register and history of holdings are found with the Central Depositary SA

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

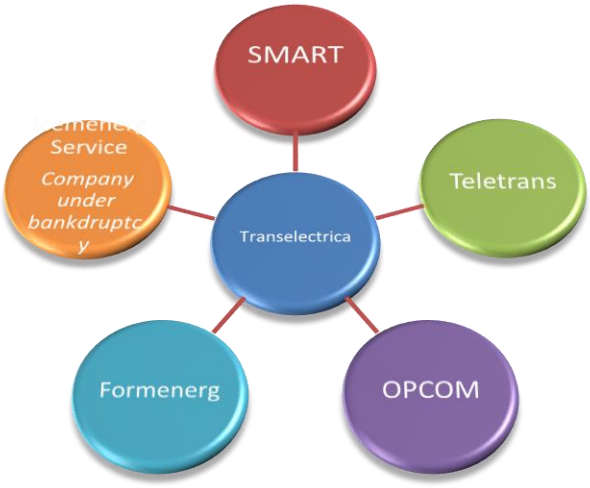
The diversity of shareholders and the inclusion in the main indexes published by BVB point out the transparency exigent requirements, relevance of information and its fast dissemination, as well as maintaining an uninterrupted dialogue with the investor public.

Group structure (subsidiaries) (102-45)

On the date of this report Transelectrica comprises five subsidiaries, Romanian legal persons organised as joint stock companies, three of which it is single shareholder: Company FORMENERG SA (Formenerg), the Company providing Telecommunications and Information Technology to Electricity Transmission Networks TELETRANS SA (Teletrans) and Company ICEMENERG-SERVICE SA (this is under bankruptcy procedure).

As far as the Company of Maintenance Services to the Electricity Transmission Grid SMART SA (SMART) is concerned, after its share capital was increased on 23.12.2014 by the Board of Administration of SMART with the value of lands which ownership certificates were obtained for, the Company became majority shareholders with 70.006% of the subsidiary's registered capital.

In case of the Electricity and Natural Gas Market Operator OPCOM SA



(OPCOM), after the share capital increase made on 13.02.2018 by AGA of OPCOM with the value of one land which previously ownership certificate was obtained for, the Company is majority shareholder with 97.84% of the subsidiary's registered capital.

Risk management (102-11, 102-30)

The strategic requirements with respect to safe uninterrupted operation determine the Company to approach risk management in proactive manner with a view to detect and treat potential losses before generating events could occur, while preparing beforehand specific technical, operational and financial solutions for possible losses, as the risk management system represents a fundamental prerequisite for sound internal managerial control.

Risk management within the Company complies with the applicable legal and regulatory requirements to have risk control capacities adequate to the Company's risk profile in order to identify, evaluate, manage, monitor, communicate, consult on and report risks:

- While complying with the applicable legal requirements to develop managerial control systems – Order 600/2018 of SGG approving the Code of internal managerial control for public entities
- While complying with the requirements of listing on the Bucharest Stock Exchange – including the provisions of the Corporate Governance Code of the Bucharest Stock Exchange, and
- While complying with other regulatory requirements, of the rating agency, of the auditors';

The set of risk management solutions used by Transelectrica aims at supporting the organization to reach its objectives and contribute to improve planning by means of the risk mitigation measures comprising, under optimised structure, the organisational and financial solutions.

Thus in organisational terms risks are kept under control at acceptable level and with reasonable costs diminished or even transferred by means of activities such as:

- Organisation, design, planning, structuring activities, communication, including measures for business continuity after occurrence of a risk; procedures have been also elaborated with principles which should be observed by all employees while labour security and safety measures were enhanced in order to reduce risks;
- Insurance contracts aiming at risk transfer; bank letters of indemnity, financial securities requested from Transelectrica's counterparts; financial solutions which include offers of shares, bond issuance and other instruments provided on the capital, insurance and other financial markets

Transelectrica's risk management policy and objectives

Transelectrica's policy consists in providing directly and by means of its branches or under service contracts with special suppliers the continuous operation and operational management of the National Power System (SEN), in accordance with the quality, security and efficiency norms provided in RET's Technical Code, providing priority and paying particular attention to the safety and health of its employees, as well as to protecting and safeguarding property and the environment.

The continuity of strategic functions for Romania's SEN - of system operator and electricity conveyor - should be maintained, even under the worst circumstances.

Risk management facilitates efficient effective accomplishment of Transelectrica's objectives. Knowing the threats – the strategic, operational and financial risks and hazards which the Company is exposed to enable their treatment according to hierarchy, depending on the likelihood of their occurrence, their impact over objectives

and the costs of measures meant to reduce the occurrence likelihood or to limit the undesired effects.

To this effect the Company has established a series of strategic objectives whose uniform purpose is to set up and consolidate a proper framework for risk management.

The specific objectives established include:

- Improving the Company's risk profile by managing the overall risk detection, analysis, estimation, treatment, communication, monitoring and review with a view to maintain risk exposure to acceptable level;
- Eliminating or reducing to minimum the conditions and practice that can lead to incompliance with general objectives, to interrupted or limited Company activities;
- Reducing the total risk cost within Transelectrica in order to contribute to providing the financial resources necessary for operational expenses, liability payment and investments;

Organisational framework of risk management (102-33)

In accordance with applicable legislation: SGG Order 600/2018 approving the Internal managerial control of public entities, in Transelectrica were constituted the Risk Management Team, Company-wide (EMRC), the Monitoring commission to implement the Internal - Managerial Control System and the Technical Secretariat of the Monitoring Commission for the implementation of the Internal - Managerial Control System (CM SCIM) with attributions and responsibilities.

Throughout Transelectrica risks that might have substantial impact over the accomplishment and completion of Company objectives are managed in accordance with internal procedures, so that each organisational entity is obliged to systematically analyse, at least once a year, the risks associated to its activities (including the significant risks at Company level, to the extent in which there is any), to elaborate proper plans towards limiting the possible risk consequences and nominate responsible people to apply such plans and also elaborate risk supervision and monitoring forms, every time they deem necessary.

The internal mode of operation with respect to risk management provides an important instrument, which facilitates risk management in methodical efficient manner in order to carry out the objectives of the Company. To this effect each year the documentation is elaborated in terms of risk management which might impact the activities of Transelectrica, containing also and describing the manner in which control measures are established, implemented and monitored with a view to limit possible threats and consequences in case risks do occur.

Risks associated to objectives and/or activities are detected and assessed in each organisational entity of the Company, in accordance with the component elements of the *Risk Register*.

The Monitoring commission analyses and provides the hierarchical priority of significant risks that might impact Company objectives, by establishing each year the risk profile and the risk tolerance limit.

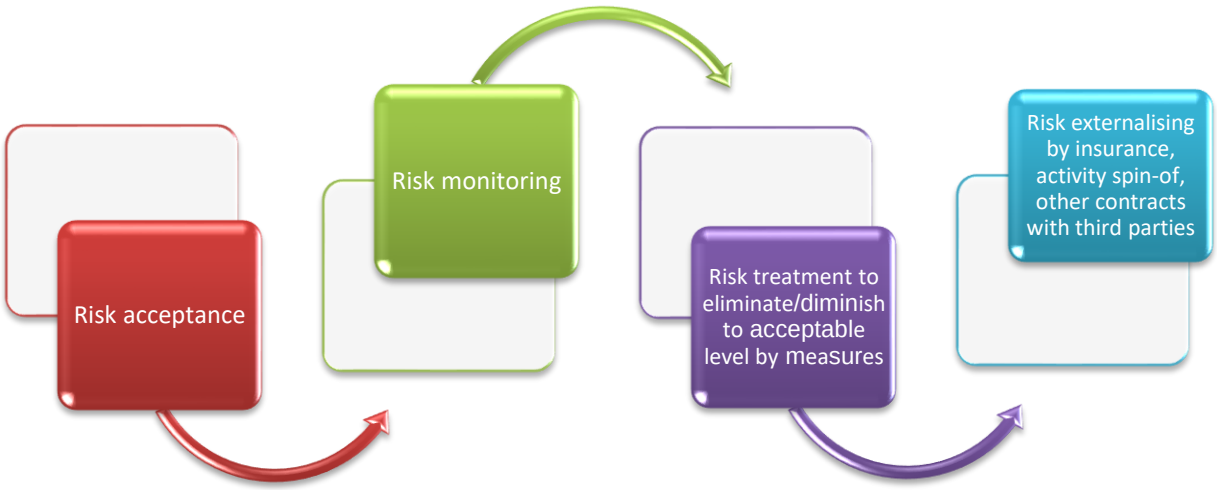
Keeping risks under control

Measures that have been applied to keep risks under control in 2019 diminished their occurrence likelihood and risk impact in comparison with the level of inherent risks.

Risks that have occurred were treated in accordance with the applied strategy as required by the circumstances that enabled risk occurrence.

In 2019 risk management activities were performed in adequate manner Company-wide, fully observing in due time the legal requirements and internal regulations.

The risk management strategy was established by applying the following steps which are meant to support internal entities in their endeavours:



Whenever risks have occurred control / check-up measures have been intensified in similar circumstances, in order to prevent such risk occurrence or the likelihood of new ones being possible.

Consequently in 2019 risk management activities were performed in accordance with internal procedures and legal provisions in the entire Company, fully observing in due time legal requirements and internal regulations. The Company is acting permanently to establish a priority of risk management and intends uninterrupted development of techniques used with a view to obtain better and better new results and to increase the functionality of all internal processes.

Relevant indicators

Key figures

**Amount associated to the 10 years' development plan, which represents the total investments planned in the 2018-2027 edition of the RET Development plan*

Rating

In 2019 Moody's confirmed the rating Ba1 with positive outlook which was also granted in 2018, showing very strong, stable and predictable financial values, a path characterised by consistent implementation of regulatory norms. Maintaining the rating has been justified by:

- The low business profile coming from the strategic significance and natural monopoly of Transelectrica, as fully regulated owner and operator of the electricity transmission network;
- Sound financial profile and low indebtedness;
- Continuous improvement of the regulatory framework;
- Governmental support in case of financial difficulty;

Estimations are such trend should further grow.

Relevant non-financial indicators

No.	Indicator		Interruption cause	Total at consumer / Total at producer
1	ENS	MWh	a. Planned outages	0
2	ENS	MWh	b. Unplanned outages caused by force major	0
3	ENS	MWh	c. Unplanned outages determined by particular meteorological conditions	8.983/0.249
4	ENS	MWh	d. Unplanned outages determined by other operators, users, producers	0
5	ENS	MWh	e. Unplanned outages owed to the TSO	91.784/6.532
6	AIT	min/year	a. Planned outages	0
7	AIT	min/year	b. Unplanned outages caused by force major	0
8	AIT	min/year	c. Unplanned outages determined by particular meteorological conditions	0.0885/0.00245
9	AIT	min/year	d. Unplanned outages determined by other operators, users, producers	0
10	AIT	min/year	e. Unplanned outages owed to the TSO	0.9047/0.0643

NOTE:
ENS – Energy not supplied to users/not produced in power plants because of long interruptions
AIT – Average interruption time

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

622 million Lei **Total amount of investment contracts signed in 2019**	2,398 million Lei **Total revenues, 2019**
985.51 GWh / 1,100.37 GWh **One's own technological consumption, 2019/2018 (gross energy)**	104 million Lei **Net profit, 2019**
61.0 TWh / 59.4 TWh **Electricity consumption / generation, 2019**	97.2 million Lei **Total minor & major maintenance, 2019**
97.5% **Achievement of minor and major maintenance planned for 2019**	

Investments in 2018 *(203-1)*

The most important investment projects signed in 2019

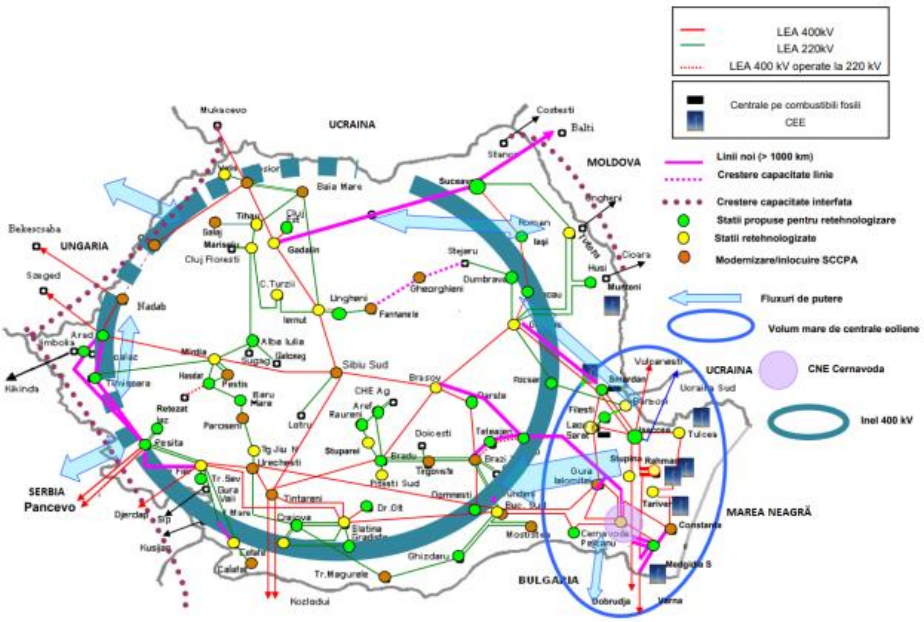
- Installing the 250 MVA transformer in the 400/110 kV substation Sibiu Sud to procure, install and commission transformer units and equipment of associated bays;
- Refurbishing the 220/110/ kV substation Iaz;
- Refurbishing the 110 kV substation Timisoara and converting the Portile de Fier-Anina-Resita-Timisoara-Sacalaz-Arad axis to 400 kV, stage II: the 400 kV substation Timisoara;
- Extending the 400 kV substation Cernavoda, stage II - connection of new lines;
- Connecting the 400 kV OHL Isaccea-Varna and 400 kV OHL Isaccea-Dobrudja in the 400 kV substation Medgidia Sud - Extending the 400 kV substation Medgidia, NFIP procedure, with ABB SRL for GIS delivery and installation;
- 100 MVAR, 400 kV shunt reactors for the 400 kV substations Arad, Bucharest and Bradu;
- Installing the 400 MVA, 400/231/22 kV autotransformer 2 and related bays in Iernut substation and upgrading the command control system of the 400/220/110/6 kV Iernut subst.;
- Replacing the 400/400/160 MVA 400/231/22 kV ATUS-SF AT3 in the 400/220 kV substation Portile de Fier;
- 400 kV mobile bays to connect BC in the 400 kV substations Bradu and Sibiu Sud;
- Installing two modern means to compensate reactive power in 400/220/110/20 kV Sibiu Sud & 400/220/110/20 kV Bradu substat. - design;
- The 400 kV substation Stalpu and upgrading the 110 kV and MV bays in substation Stalpu
- The 400 kV d.c. OHL Cernavoda-Stalpu and connection in Gura Ialomitei;

Objectives commissioned in 2018

- Refurbishing the 400/110/20 kV substation Domnesti;
- Replacing autotransformers and transformers in electric substations (stage II);
- Refurbishing the 400 kV substation Isaccea, stage I - replacing the shunt reactors, associated bays and the 400 kV bay Stupina;
- Upgrading the 110 kV substations Bacau Sud and Roman Nord pertaining to the 400 kV axis;
- Upgrading the 110 and 400(220) kV installations from substation Focsani Vest;
- Refurbishing the 220/110 kV substation Turnu Severin Est;

Benefits of achieving this wide-scale investment programme

- Increased operational safety of the SEN;
- Facilitating electricity transmission from excess generation areas to consumption regions;
- Achieving an economic operational regime of RET;
- Higher interconnection capacity, both with neighbouring countries which are ENTSO-E members and with non-EU ones: Moldova, Serbia and closing the national 400 kV ring;
- Reducing operation and maintenance expenses;
- Higher electricity quality, improved performance indicators;
- Reducing the technological consumption within RET, increasing energy efficiency;
- Introducing new technologies, implementing the SMART GRID concepts;
- Digitalising the transmission, system and operational infrastructure of the managed electricity markets;



Transparency, relations with stakeholders and material topics - dialogue between the Company and society

We strongly believe that an important part of Transelectrica's progress is represented by consolidated relationships between the Company and the society, by means of uninterrupted dialogue and commitment. Transelectrica maintains a sound commitment towards society, facilitating access to relevant information.

Communication is the key to build a reliable relation with partners

Transelectrica fulfils the obligations it has assumed towards investors, shareholders and the other stakeholders by providing transparent constant dialogue with them.

The instruments by which the Company fulfils such obligations:

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

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

The information provided in this report with respect to the events and activities performed in non-financial terms and the identification and selection of stakeholders have been performed in consequence of rigorous internal processes.

By means of specific qualitative and quantitative analysis instruments the most important 12 stakeholders have been identified depending on the need for information they can show as against that provided by Transelectrica. At the same time the most relevant topical issues for stakeholders have been identified by which the central subjects of this report have been formulated.

Approach regarding the involvement of stakeholders (102-21, 102-43)

From its very listing on the Bucharest Stock Exchange Transelectrica has prioritised the involvement of stakeholders into Company activities, especially as regards turning specific actions transparent. In this respect Transelectrica has oriented its quarterly, half-yearly and annual presentations towards an ever higher proximity to the stakeholders' needs and to permanently acquire efficiency in its communication with them.

Their opinions were expressed on the occasion of periodical meetings with Company management. The measures applied afterwards took into account such opinions and the feedback obtained on their behalf as far as the 2019 report is concerned has permanently supported the improvement of our activities.

Transelectrica has established among its objectives to improve its communicative relationships with stakeholders and to get them permanently involved into Company measure, up to the level of strategic actions.

Last but not least, the stakeholders identified in the previous report have been consulted throughout 2019 in order to enable us provide future information in compliance 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 this Sustainability Report of Transelectrica has been established following a complicated qualitative and quantitative analysis, but information has been also used because it was obtained from stakeholders as feedback. The report has been devised taking into account the recommendations of the Global Reporting Initiative with respect to the detailing degree of each individual topic, but most importantly the topical issues we have identified from stakeholders.

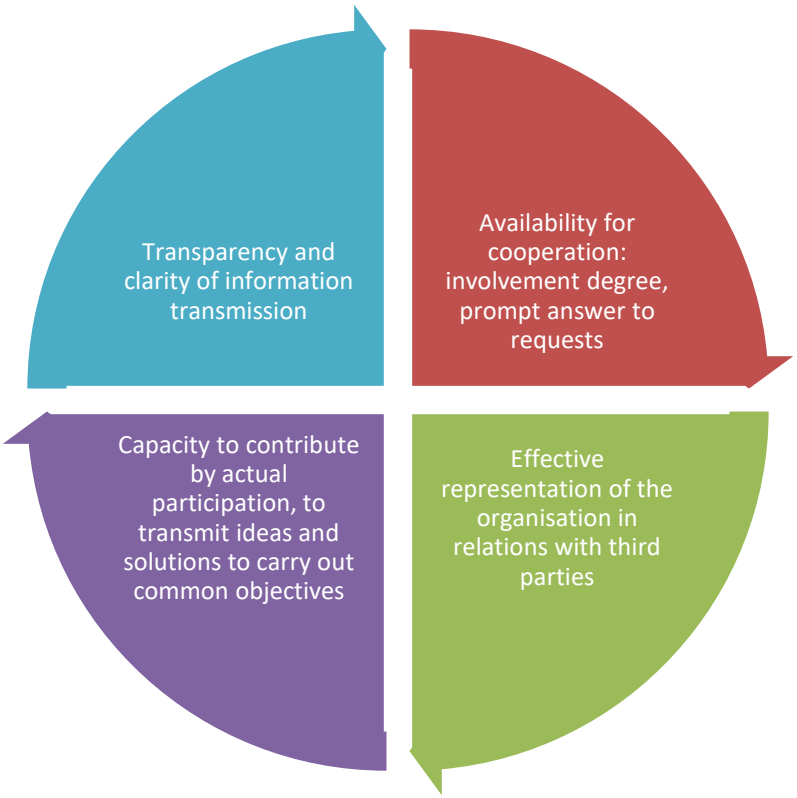
Each topic approached aims at explaining the specific aspects not included in the other reports as well as to outline the Company's perspectives in terms of sustainability.

List of material topics

Domain	Material topic	GRI / one's own indicator	Related chapter
Corporate governance	Governance system	102-18	1
	Assuming the corporate governance principles	102-16	1
	Delegation of competence	102-19	1

	Ethics in business	102-16, 205-1, 205-2, 205-3, 206-1, 418-1	1
Strategy, innovation and financial development	Financial indicators	203-1	1
	Technical indicators	One's own	1
	Risk management	One's own	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 qualification	404-2,	2
	Diversity, promotion of parity, removing gender discrimination and promoting women in managerial positions	401-1, 401-3, 405-1, 405-2, 406-1	2
	Safety and security on the job	One's own	3
	Corporate social responsibility policy	One's own	5
	Dialogue between the company and society	One's own	1
	Community needs	413-1	5
	Involvement in society	203-2	5
	Information, consultation of employees and trade union relations	403-4	2
Environment	Environmental management system	308-2	4
	Environmental risks, opportunities and costs	One's own	4
	Water, energy and waste management	One's own	4
	Preventing and limiting the environmental impact	One's own	4

Communication, collaboration, representation



Ethics in business (102-17)

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

As far as the conformity management system is concerned all over Transelectrica an integrity plan has been elaborated, which was approved at the end of 2019.

At the same time Transelectrica has designated its representatives that participated to the Annual Anticorruption Conference organised by the Ministry of Justice, on "Consolidating the administrative capacity of the technical secretariat of the 2016-2020 National Anticorruption Strategy to support the implementation of anticorruption measures".

In 2019 measures were implemented that were included in the National Anticorruption Strategy (SNA), which means there will be further emphasis placed on their application and improvement. Mention should be made that no violation was recorded of applied norms according to the SNA, nor any complaints or notification thereof.

Also the Company has paid particular attention to getting acquainted with the applicable norms for activities, which has led to a year with no disciplinary trespass from employees and no circumstances of conflicts of interests, in accordance with SNA specifications.

Code of conduct and ethics (205-2)

The Code of Professional Ethics and Conduct of Personnel from Transelectrica, reviewed in 2017, is the general document including the internal regulatory frameworks for all Company employees and provides information with respect to the manner in which they are supposed to behave in moral and professional terms, both during professional activities and outside them. At the same time it provides a guarantee that Transelectrica holds all the information necessary for the provision of an ethical behaviour, but also proof of the seriousness with which the Company is treating its partners. The review applied was meant to clear up certain aspects pertaining to corruption fighting, professional obligations but also to complying with the legal framework and internal regulations.

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

Protection of personal data (418-1)

Taking into account the legal provisions with respect to personal data, most particularly as regards the application of Regulation (EU) 2016/679 of the European Parliament and Council of 27 April 2016 regarding protection of natural persons in what regards the processing of personal data and the free circulation of such data, named GDPR, mention should be made in 2019, Transelectrica has permanently endeavoured to comply with applicable provisions.

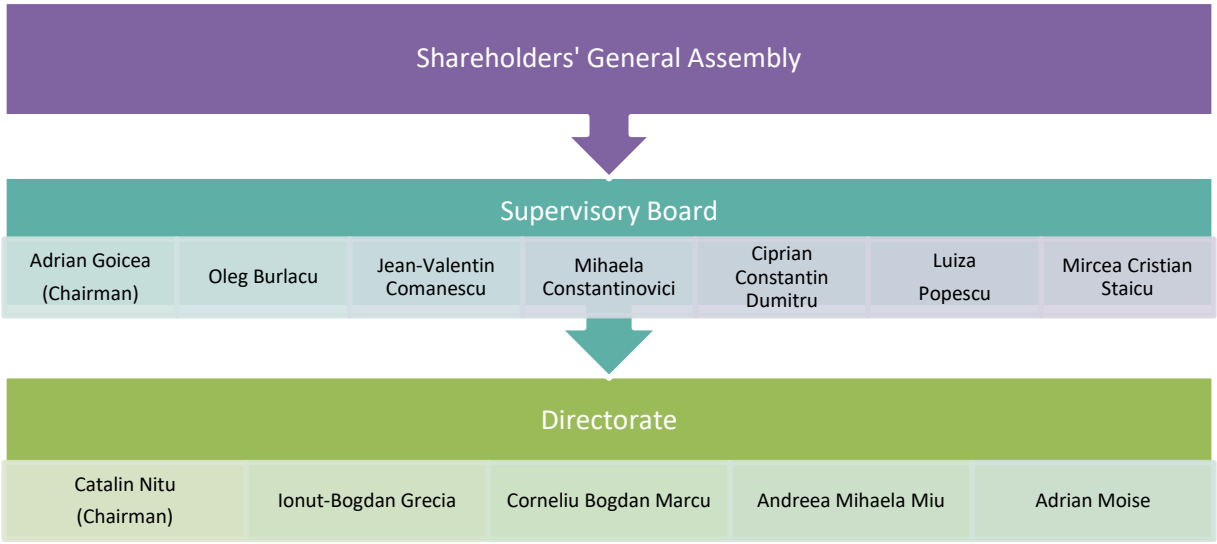
Consequently there have been no confirmed complaints with respect to such trespassing of personal data or pertaining to losing them.

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

Taking into account the specific activities of Transelectrica but also its special nature of company holding natural monopoly position on the electricity transmission market there have been no circumstances of anti-competitive or anti-trust behaviour. Consequently in 2019 there have been no legal suits in this respect.

Corporate governance (102)

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



* On 13.02.2020

The Shareholders' general assembly (AGA) is the governance body of Transelectrica, having express and limitative competencies. AGA can be ordinary or extraordinary, its 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 under monitoring of a Supervisory Board. The Supervisory Board has seven members, appointed after a selection procedure, for a term of at most four years. The Supervisory Board chairman is appointed by its members. Supervisory Board members are appointed by the Shareholders' General Ordinary Assembly, while observing the provisions applicable to companies admitted for transaction and are selected in accordance with the provisions of OUG 109/2011 on the corporate governance of public enterprises. Supervisory Board members in office on 31.12.2019 have a provisional mandate of 4 months, which cannot exceed the completion date of the selection procedure.

In accordance with OECD principles, an effective corporate governance system is implemented in order to lead to market transparency and efficiency, to be compatible with the lawful state and to clearly define the distribution of responsibilities between competent entities in terms of supervision, regulation and application of legal provisions. A corporate governance regime should protect and facilitate the exercise of shareholders' rights and to provide fair treatment of all shareholders, minority and foreign ones included. The Shareholders' General Assembly approved on 26.09.2017 substantial changes in the Articles of Association with a view to increase the

effectiveness of corporate governance Company-wide by resorting to the applicable legal framework (Decision 10/2017 of the Shareholders' General Extraordinary Assembly), as well as regarding the separation between Company management from the control over the management so that each company body can carry out its specific tasks according to legal terms and avoid potential confusion with respect to the attributions of a Supervisory Board and of an Administration Board. At the same time consideration was provided to the principle regulation by statutory documents to delegate some competencies and specific coordination of certain domains, while maintaining liability for the directorate.

Assuming the governance principles

Once its shares have been listed on the Bucharest Stock Exchange (BVB) the Company has appropriated the principles from the Corporate Governance Code of the BVB. In accordance with the BVB requirements, Transelectrica made public the Company's reviewed Corporate Governance Regulation to the investors.

The compliance with the corporate governance principles is reflected in the conformity statement with the Corporate Governance Code of BVB which the Company elaborates and publishes together with the Annual report.

Also the Company's Supervisory Board comprises the Nomination and remuneration committee, the Audit committee and the Energy security committee. During the entire mandate term in the Company's Supervisory Board / Directorate the appointed persons should meet the eligibility criteria and not to be found in the incompatibility circumstances established in the applicable law or applicable statutory provisions. In correlation with this obligation the Company is entitled to ask Board members for reasonable assurance as necessary to comply with such obligations.

Delegation of competence (102 – 19)

In view of providing efficiency to the managerial attribution of the Company and to achieve the established objectives under effective economic conditions Transelectrica has developed a system of competence delegation.

Such delegation of competence pertains to, for instance:

a) Approval of certain types of operations;
b) Approval / endorsement of documentation preliminary and/or subsequent to the approval of certain types of operations, and necessary according to legal terms or internal regulations;
c) Approval of operations with inventory effect up to a certain maximum ceiling;
d) Approving / endorsing of documentation preliminary and/or subsequent to the approval of operations with inventory effect up to a certain maximum value, documentation necessary according to legal terms or internal regulations.

Such kind of delegation observes the Directorate's limits of competence in terms of operation content and value, establishes in express manner the limits of competence and the responsibilities which the Directorate delegates and complies with the rule regarding Company representation by means of joint signature.

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

Taking into account the important role of Transelectrica for SEN management and on the electricity market, activities with strong national and international dimension, the Company is member in national and international specific organisations and bodies while taking into account to further participate to their activities. In the member capacity Company representatives have been included in working committees and groups of such organisations, in the elaboration of studies and scientific expertise. Also Transelectrica has been involved in developing projects with European and pan-European impact.

In its capacity of collective member in national associations / organisations Transelectrica intends maintaining close cooperation relationships with all important players of the energy domain and attending the events organised by such entities.

The Company has got representatives in various national organisations and associations in the domain, which belong to the working committees and groups of such organisations, participate to taking decisions, to elaborating studies and scientific expertise.

Also by means of these national associations and bodies there is a possibility to facilitate direct contacts, the exchange of information, experience and expertise; stating and acknowledging the Company's leader position in the electricity transmission sector of Romania.

In 2019 Transelectrica affiliated itself to 13 national and international associations, organisations and bodies of the domain as follows:

- **ACUE-PD** - Association of Companies of Utilities from Energy-Production and Distribution (www.acue.ro);
- **ALSTR** - Association for Live Work in Romania (www.smarsb/ro/alstr) – its main object - studying the work to energised equipment (LST);
- **AmCham** - Association of the American Chamber of Commerce in Romania (www.amcham.ro);
- **APEN** - Employers' Association "Energy" (www.fpen.ro);
- **ARIR** – Association for Relations with Investors on the Stock Exchange of Romania (www.ir-romania.ro) - it provides current and potential issuers a development platform for professional people in investor relation domain to contribute to the implementation of best communication practice with investors and corporate governance;
- **ASRO -** Standardisation Association of Romania (www.asro.ro);
- **CNR-CIGRE** - Association of the National Romanian Committee of CIGRE – member of the International Council of Large Electricity Networks – CIGRE (www.cigre.org.ro) - international technical-scientific organisation with basic objective to develop knowledge in the domain of high voltage networks and exchange information between member countries with respect to: electricity generation and transmission at high voltage, building and operating connection and transformer substations and their component equipment; building, insulation and operation of high voltage lines; systems interconnection, operation and protection of interconnected systems.

- **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) - sustains and represents in independent equidistant manner the interests of its members;

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

- **LWA** - International Live Work Association - it promotes the concept, design and utilisation of live working technologies (LST), playing a supervisory and consultancy role in this domain, without the right to execute work;

- **SIER** - Society of Power Engineers of Romania (www.sier.ro) - constituted in 1990, it actively contributes to increasing the role and efficiency of activities developed by power engineers with a view to permanently develop Romanian energy to the benefit of national economy.

- **IRE –** Association National Romanian Institute for the Study of Development and Use of Energy Sources (www.ire.ro), established in 1926 in order to promote the interests of its members in relation with public authorities, the civil society, similar national or foreign associations, different institutions with concerns in the energy domain.

Prizes and rewards the Company was awarded

In 2019 the Company or the representatives of Transelectrica obtained a series of prizes and rewards as follows:

- ***Event: Gala Ladies in Energy, organised by Focus Energetic on 15.04.2019***

Mrs. Claudia-Gina Anastase – Directorate Member in CNTEE Transelectrica SA, was granted the "*Excellency Prize for significant contribution to increasing the safety of the National Power System by refurbishing the electric substations managed by CNTEE Transelectrica SA in north-western Romania"*

- ***CNTEE Transelectrica SA obtained in July 2019 the Bronze Level***

Recognition in the top of the most sustainable companies on the local market, made by The Azores.

Thus Transelectrica is counted among the country's most responsible companies in

terms of transparency and involvement with which it developed social responsibility projects, as per the "Romania CSR Index 2019" study.

The Azores is an independent consultancy agency studying the performance and transparency level as regards corporate sustainability among companies in Romania.

- ***1st place obtained by CNTEE Transelectrica SA in the very large company category (and its specific domain) in the Top of companies from Bucharest 2019, event recognising and promoting business performance.***

Prize awarded by the Chamber of Commerce and Industry of Bucharest City in October 2019, at the Prize Gala for companies with particular economic and managerial results within the Top of companies from Bucharest.

Our people – Human resources development and diversity

Human resource strategy

An important objective to any company is represented by the provision of

an environment where each employee has the possibility to use his/her entire potential, and the promotion of equal chances.

The main pillars of the Company's personnel strategy are provided below.

The annual assessment of professional performance is conducted during the time interval established by the Directorate, under an Operation Note, in the first quarter of the year for activities of the previous year, meant to establish the general annual assessment qualification which characterises the employees' professional activities for 12 months. At the same time assessments can be achieved every time there is need, if thus useful information can be obtained for decision-making or changing one's place.

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)

Through our policy we make sure there is no discrimination in any of the recruitment, hiring and promotion activities for reasons of gender, civil status, sexual identity, religion, political options, ethnic, race, nationality, genetic features, age etc. The *Company's internal regulation* comprises, among others, rules with respect to non-discrimination principles being observed and to removing all dignity trespassing forms. Thus in 2019 no discrimination incidents were recorded and, thanks to prevention, there was no need for corrective action.

The structure of Transelectrica employees depending on age and gender is specific for the Company's domain, noticing some slight ageing for reasons pertaining to considerable loosening of vocational education, general ageing of population or intensive development of prosperous alternative domains (e.g.: IT).

As far as removing gender discrimination is concerned, women have progressed considerably in the last decades in professional terms, so they enjoy more chances to develop a successful career. Worldwide an increasing number of women arrive in managerial positions, regardless whether it is the management of a company or even governments.

In this context in Transelectrica the percentage of women hired in executive positions is over 26%, while those occupying top management in 2019 covered 35.8% from the total number of employees.

As regards the remuneration ratio between men and women, taking into account that in the energy domain in general and in electricity transmission in particular the percentage of men is still higher than that of women, both in executive positions and in managerial ones, the revenue ratio is sub-unitary yet. Nevertheless the difference between the revenues of women and those of men continues to diminish within Transelectrica.

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

In terms of employees' dynamics, in 2019 we hired 112 persons, while 186 left the Company, so the employees' average age was 47 on 31.12.2019.

35.8% women in top management in 2019, above the level of 2018

Still with respect to 2019, there have been 32 women and 6 men on leave for child rearing.

	Structure by gender categories (distinct for executive, managerial and top management positions)					
Type of position	Total number of employees	Age			Gender	
		Up to 30	30-50	Over 50	M	F
Managerial personnel (top management)	95 (4.3%)	0 (0%)	46 (48.4%)	49 (51.6%)	61 (64.2%)	34 (35.8%)

Execution personnel	2118 (95.7%)	152 (7.2%)	972 (45.9%)	994 (46.9%)	1561 (73.7%)	557 (26.3%)
Total personnel	2213	152 (6.9%)	1018 (46.0%)	1043 (47.1%)	1622 (73.3%)	591 (26.7%)

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

In order to improve performance and efficiency on the job, but also in view of providing sustainability to Company activities, the professional activities of employees are assessed every year using certain performance indicators established by means of an internal procedure.

The results of such assessments provide the Company management with a clear picture of the performance of all Company employees. The information obtained after such assessment processes can be used in risk management processes, in view of forecasting and administrating certain risks in the activity areas of personnel, as well as in the training of employees.

The remuneration system applied nowadays in Transelectrica was implemented on 01 January 2017, when the basic salary was added 4 permanent indexations, namely the work seniority bonus, the uninterrupted performance in the Company, fidelity bonus and the confidentiality clause.

The criteria and principles used in the establishment of the current salary system are as follows:

- "Equal pay for equal work" principle, implemented when positions were graded using a unit instrument;
- Granting the basic salary especially according to professional criteria – depending on the role a position holds within the organisation, the complexity degree of the profession / trade exercised, responsibility, as well as depending on the qualifications required for a position. They were determined after an objective job assessment process;
- Providing internal equity by removing discrimination based on work seniority or years within the Company;
- Payment in accordance with the importance of the job and the attention paid to performance create premises both for retention and for drawing qualified personnel.

The remuneration system has been organised by 9 classes of positions, which are structured depending on activities performed and the kind of contribution made within the Company.

Employee benefits are the following:

- Providing internal equity by removing discrimination based on work seniority or years within the Company;
- Providing salary increases, bonuses or promotions based on performance criteria, following an annual assessment of performance carried out according to criteria that have been established and communicated at the beginning of the assessment cycle.

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

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

More than 1200 Company employees have benefitted of training programmes in 2019

Employees' improvement has the purpose to provide the best training there is so that Company objectives can be accomplished in a world where success depends on performance, efficiency, quickness, the capacity to provide quality, diversity.

All along 2019 Company employees participated to training programmes (delivered by providers of professional training services) from various activity domains, of which there are the main ones: technical-IPC – 899 people, technical – 237 people, emergency situations – 72 people, SSM and SSO – 53 people, procurements – 91 people, IT – 30 people, archiving - 33 people, financial-accounting - 48 people, human resources - 28 people, other domains (audit, legislation, patrimony, risk management etc.) – 28 people.

Mention should be made also about the results and benefits of professional training programmes carried on in 2019:

- ✓ A better gender balance of course attendance in numbers was ascertained and compared to 2018 the participation of women grew 27% (183 women attended in 2019, compared to 144 participations in 2018);
- ✓ The legislative knowledge of employees was updated by specialities for domains which in 2018 either no course was organised or the participation was very restricted; we speak here about the following domains: archive, patrimony, application of international financial reporting standards, human resources;
- ✓ The number of participations to public procurement courses increased 47%; in 2019 there have been three courses organised where both specialists (experts) participated from the specific compartment and employees form other company structures but who are involved in different stages of such procurement processes for services, products or work (juridical, audit, internal control, administrative, etc.);
- ✓ Participation of 5 persons to the course with respect to implementing the National Anticorruption Strategy (2016-2020), as the new professional competence acquired are certified by ANC recognised certificates as "Expert in corruption prevention and fighting";
- ✓ A slight 5% increase of the number of participations to the technical domain as compared to 2018, this pointing out the Company's concern to maintain a high technical expertise level for all operative and operational employees.

In 2019 Company-wide the professional training strategy focussed on the central element of a complex professional education and training process, and its components laid emphasis on employees' training and qualification.

The professional training of employees represent a strong instrument of organisational development, since it provides a high professionalism degree and maintains a high level standard. Such training has been provided in close connection with the organisation's purposes and objectives, as well as with each person's specific activity.

The main objective was to provide permanent specific training, so that employees can be constantly in touch with new strategies, policies, programmes, working methods, techniques as well as technologies.

Knowing that organisational needs cannot be satisfied if individual needs are neglected the general purpose was to train employees taking into account both the quality criteria and cost efficiency, so as to increase the performance level of their activities.

Internships

Transelectrica sustained further in 2019 as well the professional training of young generations of specialists in the energy domain by annual internships.

In 2019 a total number of 128 students both of Bucharest and form the country participated to internships within Transelectrica

Internships in Transelectrica represent the uninterrupted confirmation of the Company for active support and motivation of young generations, to orientate them towards the energy domain in general, and to electricity transmission in particular.

In 2019 a total number of 128 students both from Bucharest and from the country participated to internships within Transelectrica. From among the partners of Transelectrica with respect to internships were the University Gh. Asachi Iasi, Faculty of Electric Engineering, Energy and applied Informatics; the Polytechnic University of Bucharest, Faculty of Energy; University of Pitesti, Faculty of Energy 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)

Trade unions play an important role with respect to the labour relationship between employees and employer. The trade union promotes and protects the rights of its members, taking into account their needs and opinions. A good relation between employees and employer is constituted based on efficient communication between employees' representatives and the Company's.

Similarly to 2018 and to date, almost all Company employees are trade union members, showing they recognise the utility of a union body established in order to promote their interests before the employer.

At the same time the absence of any labour conflict in the last year represents a relevant indicator of efficient mediation between employees and employer.

Responsibility to employees

Training programme and processes that provide labour health and safety *(103-1, 103-2, 103-3)*

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

Workers' instruction in labour safety and health comprises 3 stages:

Introductive-general training	is delivered by personnel from the prevention and protection departments dedicated to labour health and security.
On the job training	is delivered by the leader of the working place.
Periodical training	is delivered by personnel from the preventive and protective departments dedicated to labour health and security or by the leader of the working place.

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

Training topics are elaborated for each legislation-defined stage in order to carry out prevention activities, by the prevention and protection departments dedicated labour health and security depending on the risk assessment of each working place.

Therefore such risks associated to each working place are assessed individually and measures to reduce them are applied, or to keep them under control by means of other measures provided in Prevention plans. Concrete measures are included into Annual labour health and security programme, which are then translated into practice by qualified personnel in this domain.

In view of providing proper prevention the following training sessions are delivered with frequency as follows:

- Minimum one annual training for each employee;
- Half-yearly for other categories of technical licensed personnel from Power Dispatcher departments;
- Monthly for operational personnel and/or licensed in terms of labour health and security in electric

substations and half-yearly upon periodical joined training sessions.

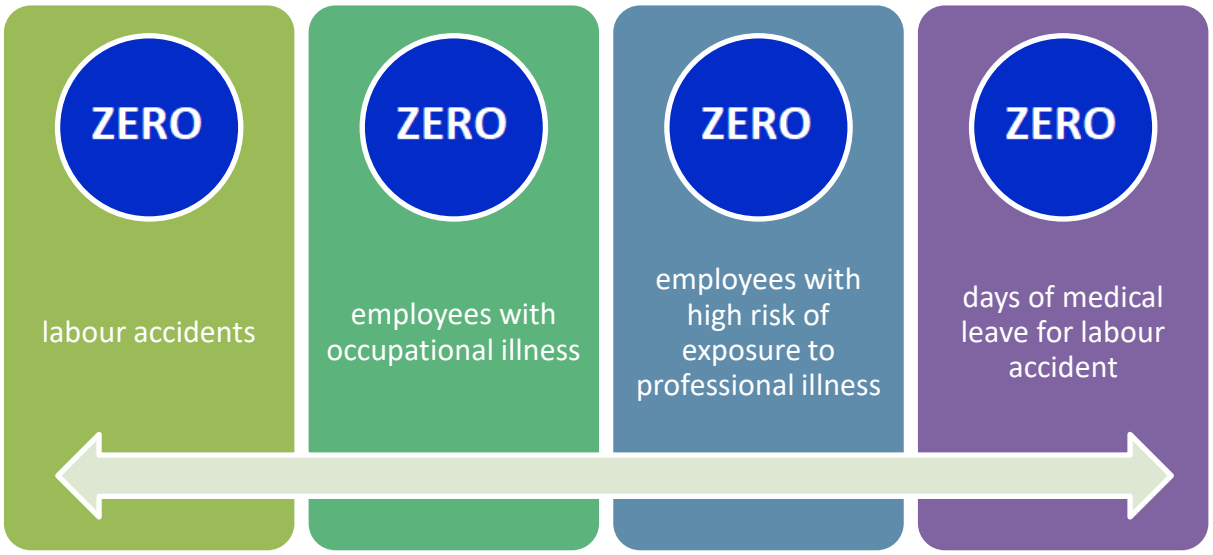
Company-wide there are 20 responsible persons in prevention and protection departments dedicated to security and health.

Training the personnel on labour safety and health involves means, methods and training techniques such as: exposure, demonstration, case study, movie pictures, slides, projections, computer assisted training.

In terms of travels to and from the working place training is provided with different frequency to all employees. Moreover each employee fills in when hired the city route statement, specifying the time and the means of transport used.

Various training domains are approached such as:

As far as events endangering the employees' work security and health are concerned, in 2019 no labour accidents were registered or death caused by accidents on the job. No medical leave was recorded for labour accidents or occupational illness and in the Company no employee is recorded with high incidence of professional illness or high risk of getting professional illness.



Organisation of mixed (management – employees) SSM committees and relevant activities in 2019 *(403-1)*

Labour health and security committees are established in accordance with applicable legislation in order to consult the workers and involve their participation to discussions on all specific problems. Labour health and security committees operate based on their own operational regulation and they meet at least once every quarter and every time they deem necessary.

The Company-wide Labour Health and Security met 4 times in 2019. From among the problems debated according to the agenda of each meeting there are: endorsing the annual labour health and security of the Company; analysis of problems of labour security and health specified by employees from branches and DEN; supervision of the achievement degree of measure plans regarding labour health and security; endorsing the operational procedures for labour health and security; the manner in which labour conditions are provided, individual protection equipment for workers, analysis of last year's labour health and security activities based on the report and endorsing such report.

In 2019 when the Professional training programme was approved Company-wide training activities remained uniform.

Environmental responsibility

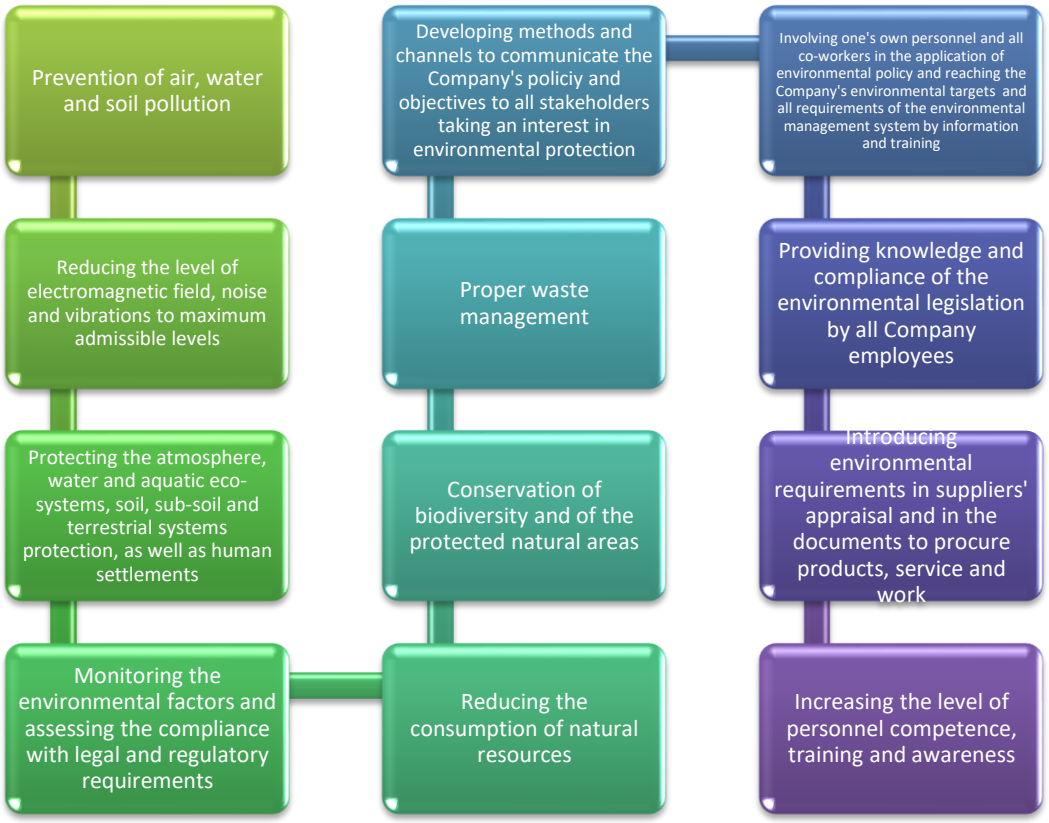
Environmental management system (103-1, 103-2, 103-3)

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

The environmental management system of Transelectrica has been certified according to the requirements of SR EN ISO 14001:2015 standard by SC SRAC CERT SRL (IQNet partner), thus providing the general conditions necessary for provision of electricity transmission services, electricity dispatch, administration of the electricity market in accordance with legal requirements and others the Company has subscribed to, as applicable to its environmental aspects and demonstrate one's concern with pollution prevention and increase environmental performance.

The environmental objectives and targets have been included in the annual Environmental Management programme aimed at reduced pollution of air, water, soil, reduced levels of noise and vibrations, improved waste and used water management, restore the natural landscape after maintenance / development work, protection of flora and fauna and monitoring environmental factors.

The main directions to achieve environmental objectives



Environmental risks, opportunities and costs

High voltage electric installations mainly constituted by overhead lines and connection and transformer substations represent equipment of significant environmental impact coming from their technical complexity, from the land areas they occupy as well as from the length of overhead lines, usually crossing the territory of several counties.

No pollutants are discharged in the environment during normal operation of RET installations. There can occur accidental leaks of certain chemical substances of pollutant impact in case of improperly tight equipment, wrong operations, and failures or during construction and maintenance work.

Environmental aspects are identified and assessed for technology and construction from the very first design stage. As such they are included in the Environmental Management Plan (for the installation construction, operation and dismantling), which includes the Programme of measures to prevent pollution and reduce impacts, as well as the Environmental factors monitoring plan.

Environmental aspects associated to construction

Type of impact	Modes of occurrence (effects)
Physical	• Impact on soil by opening new access routes, topsoil removal and excavations • Land occupation by site organisation, storage places included • Impacting the flora (by deforestation) • Impacting the fauna (by fragmenting habitats) • Impacting birds (by constituting aerial obstacles located in their flight corridor) • Generating waste (porcelain, glass, concrete, metals, used oil, packaging materials, rubble, etc.) • Impacting the population and fauna by the noise produced by equipment, transportation means, etc.
Chemical	• Soil and/or water pollution by accidental leaks of fuel, oil and other chemical substances • Air pollution by means of: - Flue gas emissions (SO_x, CO_x, NO_x, COV, suspended powders) from heating installations or transportation means - Sulphur hexafluoride emissions (SF_6) – accidental leaks occurred during gas handling or because of improperly tight equipment - Powdery emissions because of construction-installation work - Emissions of volatile organic compounds from paints and diluters, etc.
Socio-economic	• Disturbance of social activities, including population moving out

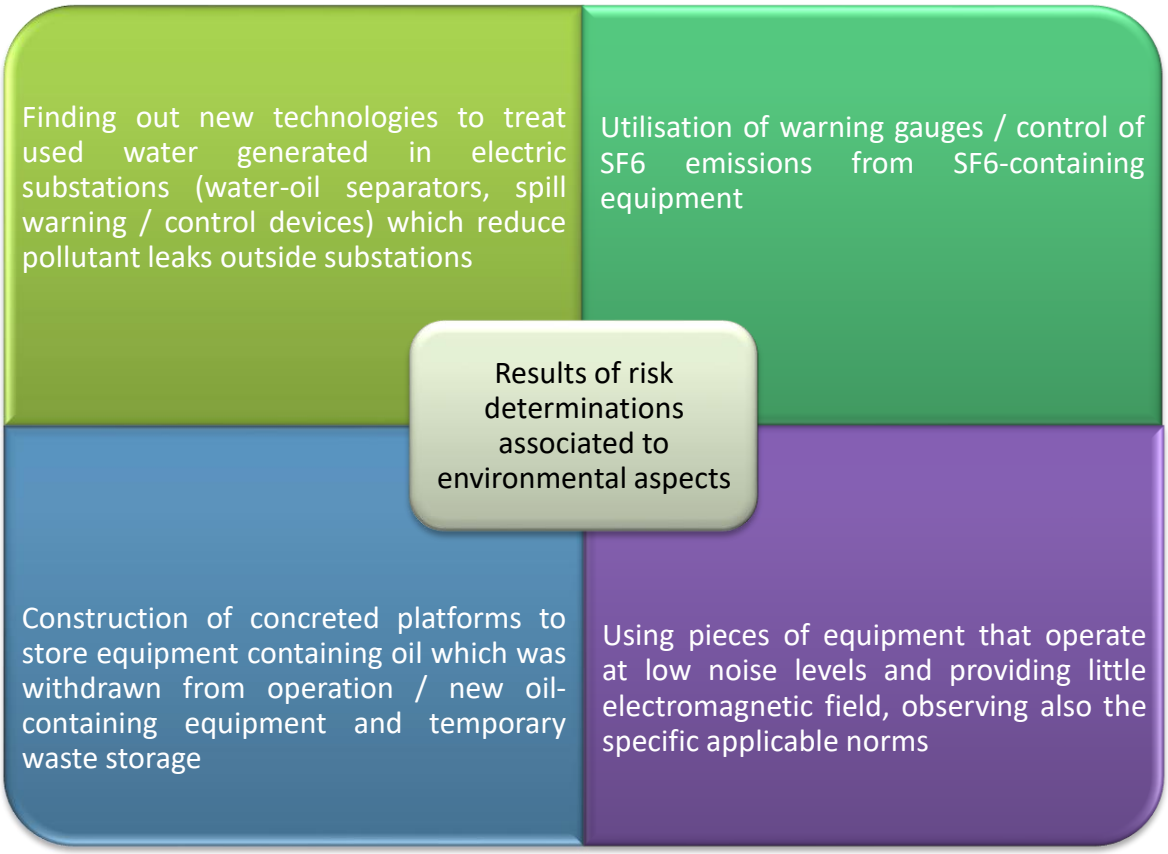
Environmental aspects associated to operation-maintenance

Type of impact	Modes of occurrence (effects)
Physical	• Land occupation with OHL routes and substation locations • Impacting flora by systematic vegetation removal • Impacting fauna (fragmenting habitats, electrocution, etc.) • Impacting birds and flying apparatuses (aerial obstacles located in their flight corridor, collision, electrocution, etc.) • Danger of electrocution or burns when getting in touch with or by OHL falling near or upon road crossings, railroad, water courses, buildings, etc. • Danger of fire because of deteriorated insulation or from accidental conductors' getting in touch with objects or dry vegetation

	• Impacting the population and fauna by the noise and vibrations produced during operation of RET installations or their vibrating • Impacting the population and fauna by the noise generated by corona effects from high voltage installations • Acoustic and luminous effects from corona phenomena • Disturbance of radio and television systems produced by the electromagnetic field • Influences of the electromagnetic field over telecommunication installations or on other electric networks when they inter-cross or are found nearby • Effects of the electromagnetic field over living beings
Chemical	• Soil and/or water pollution by accidental leaks of fuel, oil and other chemical substances • Air pollution by means of: - Flue gas emissions (SO_x, CO_x, NO_x, COV, suspended powders) from heating installations or transportation means - Sulphur hexafluoride emissions (SF_6) – accidental leaks occurred during gas handling or because of improperly tight equipment - Ozone and nitrogen oxides – corona effects at high voltage - Sulphuric acid vapours – from accumulator batteries
Visual	• Impacting the landscape
Psychic	• Fear caused by the proximity of RET installations and by their visual and luminous effects

Transelectrica has applied proper measures to prevent pollution and reduce the environmental impact, both during operational activities and during maintenance operations, as well as while performing investments, which mean construction-installation work.

Such risk determination associated to significant environmental aspects for activities / processes performed in Transelectrica has led to a series of beneficial effects and opportunities.



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

a) Land occupation

Areas taken up by electric lines and substations:

	Without safety area [m²]		With safety area [m²]	
	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

During normal operation of RET installations no noxious substances are discharged on ground, into underground or terrestrial water. Accidental pollution can occur caused by improperly tight / broken equipment containing dangerous substances or electro insulating oil, or defects occurring to the oil regeneration / supply / discharge installations or pieces of equipment.

Similarly, oil / fuel leaks can occur from motor cars, outfits and transportation means during construction and maintenance (the oil leaking into ground was retained with absorbent biodegradable earth).

c) Sources of air pollution

During normal construction, maintenance and operation activities of RET installations no significant quantities of pollutants are discharged in the atmosphere. However during construction, maintenance and operation of RET installations the following atmospheric emissions can occur: suspended powders -

from construction works, or by flue gas - from motor cars, electric generating sets of thermal power plants, ozone in negligible amounts (Corona effects), sulphur hexafluoride - as a result of un-tight equipment or improper gas handling.

Flue gas can occur in case of fires or explosions (SOx, COx, NOx, COV, suspended powders, etc.), while high voltage OHL-s generate atmospheric pollution by ozone and nitrogen oxides after Corona occurring around active conductors, especially in rainy weather. The additional contribution of such pollutant substances to the existing amount is not major and cannot lead to exceeding the legal information threshold values, beyond which there is hazard for human health.

d) Sources of used water

Electricity transmission does not generate technologically used water. The used water generated on the locations of RET installations comes from the following sources:

- Domestic used water from human activities - which is directly discharged into urban drainage or it is emptied and carried to a station treating urban used water or it is locally treated within micro-stations and discharged on ground or into terrestrial water sources.
- Rainwater collected into the tanks of oil-containing equipment and in the manholes of concreted platforms for waste and equipment storage (it can contain oil from leaks) - it is mechanically cleaned in the water-oil separators and discharged in the city drain or it is emptied and carried to a station treating urban used water or it is discharged on ground or into terrestrial water observing the maximum admissible limits of environmentally discharged pollutants.

e) Generating waste

Electricity transmission activities do not generate waste directly. Waste comes from construction, maintenance operations and human activities. The quantities of waste are different from one year to another, depending on the volume of investment and maintenance work.

The waste generated in 2019 was disposed of / capitalised by licensed companies.

Generated waste (t)	Capitalised waste (t)	Removed waste (t)	Stored waste (t)	Indicator of waste management: Waste disposed of, capitalised / generated waste
7153.27	944.05	5045.8	1163.42	84% (compared to 76.41% in 2018)

f) Electromagnetic field generated by RET installations

Transformer/connection substations and the 220V & 400 kV OHL provide quite low impact over their surroundings, being found only around RET installations. A great part of disturbing effects is caused by electric induction (into metallic objects or structures that are not grounded) and by interference phenomena (radio interference). The constructive solutions adopted for high voltage electric lines and substations provide proper protection against the exposure of living beings to the electromagnetic field, and diminish the environmental impact of such installations. In accordance with specific studies performed by speciality institutes, the intensity of the electric field found near the 220 kV and 400 kV overhead lines decreases with distance, therefore about 25 – 30 m away from the line axis the intensity of this field is zero.

In 2019 measurements showed the values required by applicable norms have not been exceeded within electric substations and upon line crossings of roads, railroads and intensely populated regions.

g) Acoustic pollution

During construction noise can be produced because of work execution or during the operation of equipment and vehicles. Afterwards acoustic pollution results from operation, during the vibration of RET installations or upon Corona discharges in the space around active conductors. The noise level of Corona effects 25 m away from the active conductor varies from 53 dB in rainy weather and 33 dB in fine weather.

Similarly to 2018 no noise exceeding the maximum admitted level was registered in 2019 either.

h) Impact on fauna

Such impact is significant and most especially on birds, because they collide and get electrocuted by RET installations within migration corridors or protected areas. The main migratory corridors of various types of birds have been detected in Banat, Dobrogea and the Danube Delta regions.

For bird protection within OHL areas the following measures have been applied:

- Bird-repellent devices installed on towers;
- Bird-repellent spirals were installed on OHL conductors, as well as coloured panels imitating usually birds of prey.

i) Impact on vegetation

This impact is determined by final or temporary ground occupation and by vegetation removal within the safety areas of RET installations as it exceeds a certain height, in order to prevent fires. Such impact can be significant only in protected areas.

j) Species found in the red list of IUCN and in the national conservation list with habitats within the zones impacted by operations and the measures applied in order to preserve their habitats

Artificial nests have been installed on high voltage towers in order to protect the Danube hawk, endangered species on the brink of extinction, as follows:

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

Artificial nests are metallic or wood boxes which were installed on high voltage towers, because the Danube hawk prefers nests providing good visibility of the area and favourable feeding places nearby. It is necessary to place the nests on artificial props, such as high voltage towers because there are no tall solitary trees on agricultural lands and lawns (historical nesting places).

Such installation of artificial nests belongs to the “Conservation of the Danube hawk in north-eastern Bulgaria, Hungary, Romania and Slovakia”, a multi-national project with European financing since the importance of providing species protection and preservation is also acknowledged at EU level.

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

Elaborating the documentation

- Elaboration of documentation and submission of files to license / re-license the objectives managed by the Company in terms of environmental protection and water management;

Execution of work for

- Construction or maintenance of drainage networks for domestic and/or rainwater;
- Installing water-oil separators to the tanks of oil-containing equipment and storage platforms;
- Building concreted platforms for temporary storage of equipment and waste;
- Maintenance operations to oil- or SF6-containing equipment in order to prevent leaks;
- Painting the towers of overhead lines (OHL) using landscape-friendly colours;
- Deforestation / maintaining the safety corridors for OHL;
- Land recovery / development (when work is completed) in order to bring it back to its initial condition;

Service procurements regarding

- Monitoring used water quality in Company substations and offices and proposing solutions to reduce pollution according to the terms of environmental and water management permits;
- Monitoring pollutant emissions in the atmosphere (noise, electric and magnetic fields, pollutant emissions, ozone concentrations); the values obtained for determining parameters have been reviewed and interpreted, leading to conclusions about the level of pollutant emissions and compliance with limit values provided in the legislation;
- Waste collection, sorting, transport and capitalisation / disposal of;

Environmental management plan

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

With respect to its future activities Transelectrica aims at reducing the environmental impact of its installations, mainly by means of activities such as reducing the land areas occupied, reducing the impact over fauna and flora or reducing the intensity of the electromagnetic field on ground. Mention should be made in 2018 there were no significant leaks providing environmental impact.

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 and heat transmitting oils • Paper and cardboard packages • Plastic package • Wood package • Glass package • Worn-out tyres • Oil filters • Brake plates • Ferrous metals • Plastic materials • Glass • Component with no specification • Other unspecified waste type for car maintenance • Dismantled equipment containing dangerous components • Waste of worn-out electric and electronic equipment (DEEE) • Components taken out of dismantled equipment • Lead batteries • Alkaline batteries • Accumulator batteries • Copper, bronze, brass • Aluminium • Iron and steel • Ol-Al (cables) • Metallic mixtures (cast iron) • Plastic and rubber materials • Paper and cardboard • Textiles • Fluorescent tubes and other mercury-containing waste • Dismantled electric and electronic equipment • Wood • Plastic materials • Metals • Leather	• Tiles and ceramic materials (porcelain insulators) • Wood	• Mineral non-chlorinated engine transmission and lubricating oils • Sharp objects • Medical infectious-stingy waste • Chemicals consisting of or containing dangerous substances • Pills • Plastic and rubber materials • Other engine, transmission and lubrication oils • Sludge from water-oil separators • Oily water from water-oil separators • Protective clothing	• Tiles and ceramic materials (porcelain insulators) • Earth and stones • Mixtures of construction and demolition waste • Plastic and rubber materials • Fluorescent tubes and other mercury containing waste • Mixed municipal waste • Sludge from septic tanks • Worn-out tyres • Oil filters • Brake plates • Concrete

Exceeding the admitted environmental regulation limits and methods to solve such instances *(307-1, 308-2)*

As regards circumstances when the limits admitted in applicable regulations were exceeded, mention can be made of just one situation:

- In the Transmission Branch Constanta, at BAC motor ICAR a value was exceeded in the water sample taken, with respect to the indicator amount of “phenols”. It was just minor exceeding and it constituted no problem. As a matter of fact the National Environmental Guard entities from Galati, Salaj, Dolj and Tulcea provided controls and no major deficiencies were found out.

Future measures to diminish locally identified problems (103-1, 103-2, 103-3, 203-2)

Environmental protection

Our environmental protection policy takes over the commitment to carry out all 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 and system operator

Rational utilisation of natural resources

Reducing the pollutant emissions in the environment and measuring them

Proper management of waste resulting from maintenance and refurbishment activities

Periodical monitoring of environmental factors (water, air, soil, noise, electromagnetic field, waste)

Upgrade and refurbishment of installations with best-in-class technolgies, using which environmental pollution is prevented or reduced

Providing knowledge and observance of environmental legislation by all Company employees, by means of information, training and motivation

considers it has major responsibility towards future generations and strives permanently to find out economic sustainable solutions in order to develop and upgrade its installations in accordance with the European Union's requirements of environmental protection.

Education

Having turned ourselves towards corporate social responsibility means we provide support to education to enhance its quality both with respect to the technical area, which is specific for the Company and in terms of support domains. To sustain such ideas we will further commit ourselves towards active involvement in higher education quality in specific Transelectrica activities.

Health

The health of employees and of everyone around is a priority for Transelectrica, therefore we will further continue to help the specific associations in the following years in order to promote eligible projects meant to improve Romania's health system.

Corporate volunteering

An increasing number of employees consider the Company's social and ethical values as very important ones. This is the reason why employees are important public for the corporate social responsibility strategy of Transelectrica. Corporate volunteering is the most relevant team-building method, since employees are more and more involved into the activities which are organised; the purpose of the Company is to promote this activity as much as possible into the future.

Corporate social responsibility

Corporate social responsibility policy (103-1, 103-2, 103-3)

Transelectrica continues its participation in the development of the society it performs in, as it has major importance for the Company's fundamental values. By means of its social responsibility projects the Company takes into account both society's interests and those of its employees, shareholders, community and the environment.

The main Company objectives in terms of corporate social responsibility are as follows:

- Investment into young people's education and development;
- Sustaining the humanitarian initiatives of non-governmental associations;
- Participation into the cultural development of communities;
- Providing support to employees in case of major health issues;
- Getting employees involved into corporate volunteering programmes;
- Investments into environmental protection;

Reviewing the community needs *(203-2, 413-1)*

As far as community needs are concerned, the most important problems Romania is faced with for the time being are the social (poverty and social inclusion of disfavoured groups) or the economic ones (unemployment, low revenues), but also the issues occurring in complementary domains such as quality of education and access to it, health, electricity and drinking water.

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

Involvement in society *(413-1)*

In order to support the development of a sustainable performing Romanian society Transelectrica is getting involved in the communities where it performs, while attempting at the same time to get as close as possible to the needs of people outside the Company's impact areas.

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

The third year in a row the executive management of Transelectrica encouraged its employees' participation as volunteers into the "Shoebox – Gift in a shoebox" project.

In terms of performance the Company managed transposing 89.23% of the budget allotted in 2019 into corporate social responsibility, going very near its 90% target established at the beginning of last year. In 2020 we would like to exceed 90% and allocate all amounts to important causes, with significant impact over the society at large.

Projects with Transelectrica's involvement in 2018

- ***Education and training***

Sustaining pupils from technical Colleges and High Schools of Romania

The Company got actively involved in activities sustaining education, in order to provide young students with a proper studying environment. In time we cooperated with educational institutions of the power domain by providing equipment to research laboratories and study grants to pupils and students who got particular results.

Also in 2019 the Company supported the Polytechnic Foundation of Timisoara to optimise didactic activities and motivate students for technic education. The main activities consisted in endowments of technical laboratories with new pieces of equipment.

Association of Educational Robotics and Science WRO

Great added value domains such as IT and robotics are those that can provide development of all economic areas of interest, including the energy sector. This is the reason why the Company has sustained this year again the robotics team SuperFly to participate with a competitive robot to the WRO Friendship Invitational Tournament, representing Romania. We are proud for the success of our children and will further sustain activities including young people's involvement in domains of good future prospects.

- ***Humanitarian activities***

Association of the Good Deeds Factory

Transelectrica helped completing the budget necessary to the "CASĂFacemBine" project consisting in a house built for six children and their mother, with the help of an entire community. The contribution of Transelectrica shouldered the Association in getting the required resources to make the children's dream come true, namely to have a house of their own.

Association Autism Voice

The Company provided financial support to the Association Autism Voice whose mission is to sustain by all their cumulated means and knowledge the recovery and social integration of autistic children or of those showing development troubles.

Maria Beatrice Association

We have been partners in the "Medical recovery centre for children" Maria Beatrice project, consisting in its equipping with a brain-scan. Maria Beatrice Association provides support to children with special health problems, especially to secondary issues of neurologic cause, as well as improvement of the living standard for the disfavoured children and pupils in social terms. Every day the Maria Beatrice Centre of Alba Iulia provides services to 60 children from Alba County and every year 28 families with children come to the Centre for two weeks' treatment sessions.

Association Coaching – Life Coach 4 TRANSformation

This Coaching Life Coach 4 Transformation Association established in 2012 has become a professional milestone by the very good results obtained under special therapy programmes and neuropsychological assessments for children with behavioural and autistic troubles. The Association has also specialised in training therapists. The project the Company supported is named "Help the autistic children! Send them to therapy!" which aims at early diagnosis, neuropsychological assessment and elaboration of personalised intervention plans, individual but also for groups.

- ***Corporate volunteering***

SHOEBOX Campaign – A gift in a shoebox

This has been the third consecutive year when Transelectrica encouraged its employees to participate to the volunteer project entitled Shoebox – A gift in a shoebox. We have decided to further provide children having limited financial possibilities with joy and smiles. After this humanitarian campaign more than 120 gifts were gathered then directed to disfavoured children of primary and blind schools.

We intend to always participate in this project and determine every year both our employees and our families and friends to come help the needy people.

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 it committed reviewing and tailoring legislative provisions towards enhancing energy efficiency, including it also in the development and refurbishment of the electricity transmission network.

Transelectrica elaborates each year the "Energy efficiency improvement programme"

Regulations have been conceived so as to address distinctly the industrial sector (economic agents in this domain), the tertiary sector (economic agents, public institutions, non-governmental associations, etc.) and the residential sector (population). The energy efficiency regulations are meant to promote and stimulate approaches and mechanisms such as:

- Energy management at the consumer's;
- Developing technologies efficient in energy terms as well;
- Promoting new renewable energy sources;
- Development and diversification of energy efficiency services;
- Professional training and education on energy conservation;
- Promoting energy efficiency international cooperation programmes;

Energy efficiency activities of Transelectrica are grounded on the requirements from internal legislation in compliance with the applicable European legislation, namely:

- Directive 2012/27/EU of the European Parliament and Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and cancelling Directives 2004/8/CE and 2006/32/CE;
- Directive (EU) 2018/2002 of the European Parliament and Council of 11 December 2018 amending Directive 2012/27/UE on energy efficiency;
- Law 121 - proposed in order to apply Directive 27/2012 on energy efficiency to end-users' and energy services;
- National Action Plan of Energy Efficiency (PNAEE IV 2017 – 2020);
- Law 372/2005 on the energy performance of buildings;
- ANRE Decision 366 of 6 March 2019 approving the templates for the total annual energy consumption and for the energy analysis questionnaire of energy consumers;

In 2019 the elaboration of Transelectrica's energy efficiency strategy has been launched. The document is in the completion stage with the latest legislative amendments in this domain.

Energy efficiency has been approached everywhere in Transelectrica targeting five main directions, namely:

1. Reducing the amounts of electricity to compensate losses within RET (CPT);
2. Reducing the electricity consumption supplying auxiliary services of electric substations;
3. Reducing the electricity consumption of administrative offices;
4. Reducing the heat consumption for buildings (both by reconsidering the installations and by increasing the energy efficiency of buildings);

5. Reducing the fuel consumption of the car fleet;

Taking into account that Transelectrica is found in the category of industrial consumers above 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 the Consumption statement and the Energy analysis questionnaire for last year;
- Annual elaboration of the "Report assessing the energy efficiency growth potential of electricity networks and the Annual programme of measures and investments to improve energy efficiency in the Electricity Transmission Grid".
- Annual elaboration of the "Programme to improve energy efficiency".

Current activities in the energy efficiency domain

Current energy efficiency activities are as follows:

- Energy audits performed in technological terms but also to buildings;
- Optimising the electricity and heat consumption in Transelectrica's buildings;
- Updating the specific requirements to upgrade transmission network assets according to the energy efficiency growth targets;
- Using the ENTSO-E (cost-benefit) methodology to validate investment projects, including energy efficiency indicators;

The 2019 activities specific for energy efficiency are as follows:

1. Initiating the procurement for the second energy audit stage in Transelectrica's buildings;
2. Achieving 95% the Energy Efficiency Strategy;
3. Extending the "info technic" database;
4. Elaborating terms of reference for the "Smart grid pilot project - Building a smart-grid solution to use renewable energy and storage for the auxiliary services in the 400/220/110 kV substation Brazi Vest";
5. Launching the study on the use of Li-Ion batteries for auxiliary services in Transelectrica's substations and turning flexible the associated consumption;
6. Initiating the feasibility study to install two modern means of reactive power compensation (FACTS) in the 400/220/110/20 kV Sibiu South & 400/220/110/20 kV Bradu substations;

New technologies

The Energy Union's strategy aims at increasing the utilisation of renewable electricity sources in the generation mix, which should enhance the clients' positions and place households and enterprises in the focus centre of the European energy market. The roadmap of ENTSO-E proposes using new technologies for such challenges.

Among the utilisation lines of new technologies we can find:

I. Digitalisation;
II. Standardisation and data exchange;
III. Integration of storage systems;
IV. Greater efficient utilisation of the Electricity Transmission Network;

To Transelectrica the need to expedite technological innovation is obvious. The development of new technologies for network equipment and modelling methods will enable the Company to carry out its mission in an evolving power system. This mission is also shared by the Regulatory Authority in the energy domain that encourages network operators to look for innovative solutions.

The Company is focussing more on integrating the technology than on innovation or the manufacture of the new technologies themselves.

At the same time the strategy sustains the development of smart technologies requires significant efforts to also implement a great number of "*smart initiatives*".

In accordance with the programmes developed or initiated these last years in Transelectrica with respect to developing new technologies we can find:

1. Implementing technologies for network monitoring and control, including to its components;
2. Installing sensors and developing smart infrastructures in order to monitor the technical condition of critical assets;
3. Implementing security solutions with respect to information confidentiality, availability and integrity;
4. Non-destructive investigation systems for the inaccessible components of OHL towers (underground guys); the solution is extremely useful in circumstances of outage and during large excavation works;
5. Bird-repellent protection systems according to the requirements of the Environmental Guard; these are solutions protecting the birds with habitats near high voltage lines;
6. Systems attenuating the OHL galloping by means of pendulum items; the solution has already proved extremely efficient for mechanical line stability;
7. Determining and using the transmission capacity established in dynamic mode as complementary method for more efficient operation of existent infrastructures;

In 2019 new projects of interest with respect to using new technologies, of which mention can be made of the following:

1. Using RTDS – Real Time Digital Simulation systems for Transelectrica-wide system investigations;
2. Using Li-Ion batteries for auxiliary services in Transelectrica substations and turning flexible the associated consumption;
3. Replacing the car fleet of the executive branch with electric motor cars;

European projects which Transelectrica is a partner of

CROSSBOW European research project

CROSSBOW (Interconnection management by interconnecting renewable energies and storage units under a trans-national wholesale market) is one of the largest research-innovation projects financed by the European Commission under the Horizon 2020 Programme, a part of H2020-LCE-2016-2017 (COMPETITIVE LOW-CARBON ENERGY) topics under LCE-04-2017 – "Demonstration of integration in a system of smart grid technologies and smart storage, against the background of higher shares from renewable energy sources".

The project consortium has 24 partners (of 13 countries): 8 Transmission and System Operators of South-Eastern Europe, 1 Distribution Operator, 1 Regional Security Centre, 2 Large producers, 5 Universities, 6 Partners from industry and one Association.

This project began in November 2017 and is now found in the technology development stage, having already defined its "requirements" and "use cases".

Transelectrica is one of the transmission and system operators of the total 8 involved, with the most mature market and playing an important part in the project in terms of its network and geographical position.

At the end of the 48 months the project proposes developing and finding solutions for a more efficient utilization of interconnection lines, the producers from renewable sources and the storage units distributed in the entire Balkan region (SEE Region), by means of developing 9 products. They will represent new options for the present-day players as well as for the future ones on the energy markets.

Transelectrica will participate into most of the working packages organised therein, bringing its wide-scale contribution into this project from which it expects important outcomes for what electric power systems are to become in the following decades.

ReServe European research project

European electric power systems have been actively involved in finding solutions with respect to using on an ever larger scale the renewable energy sources in view of accomplishing environmental objectives which have been assumed at community level.

The RES topic (Renewable Energy Source) integration in the power system (programme H2020-LCE-2016-2017, subject LCE-07-2016-2017 - Developing the next generation of technologies for renewable electricity and for heating / cooling systems) was launched under the European Commission's research and innovation programme, with 5 million Euro budget. RESERVE has been registered under this programme and aims at investigating new concepts with respect to the steady-state of electric power systems. The future power systems will use renewable energy sources in order to minimise CO2 emissions. For the time being large generators supplied by the fossil fuel-fired turbines are maintaining the stability and quality of power supply, just by means of their mechanical inertia. The inertia of such turbine-generator units provides the suppliers with a significant time window during which they have the leisure to respond to the network events. In the future they will have to find urgent solutions for the stability of the power system, even if RES supposedly can reach 100% (circumstances when inertia is too often lost because of the static energy converters).

RESERVE has approached this challenge by investigating new concepts of the electric power system, which are implemented as a new kind of system services enabling distributed multi-level

control of the power system while using the pan-European network codes.

Project RESERVE has drawn the attention of evaluators from the European Commission, and this subject received highly important contribution from Transelectrica as it has been the only transmission and system operator of this project that can provide significant data (values measured from PMU equipment and electricity metering profiles by one minute intervals). Consequently the Company has been included in the project consortium. Also the project was assessed at 14 points out of maximum 15, thus obtaining full financing from European funds.

The project began in October 2016 it was developed during the following three years and was coordinated by Ericsson GmbH (DE), while consortium members are as follows: 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). The project saw its successful completion on 30.09.2019, and the results obtained therein have been greatly appreciated for the future of the worldwide energy domain.

FUTURE FLOW European research project

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

The project enjoys a budget of approximately 14 million Euros, having provided a 4 years’ implementation stage while it aims at approaching a series of aspects in the context of new network codes being elaborated and issues coming up such as balancing electric power systems and establishing regional markets for system services.

FutureFlow approaches the application domain of secondary frequency control, from generation to consumption and will provide performance at international level for such specific activities of electric power systems. Taking into account such objective the partners in the FutureFlow project are exploring new solutions of power system balancing and flow management within the Europe-wide electricity network. “Modern” consumers approached by FutureFlow will be able to increase or decrease their consumption in a matter of seconds and thus will also accomplish their control functions, which nowadays are achieved mainly by the thermal hydro power plants as well as by the conventional thermal power plants.

The project is addressing both the Transmission and System Operators as well as to the traders on the electricity market and to manufacturers of industrial components and of communication for the electricity domain.

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

- Slovenia: ELES - Transmission and system operator, Elektro Energija (Retailer and VPP operator), EIMV (Research-development and design institute), GEN-I (Retailer);
- Austria: APG - Transmission and 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 and system operator;
- Serbia: EKC (ICT & consulting company);

From among the project accomplishments so far mention can be made of the following:

- Study on the balancing markets of four Transmission and System Operators, in terms of control potential, the technical characteristics of controllable consumers (Demand Response – DR) and of distributed producers (Distributed Generation – DG). Study with respect to market adaptation for participation of large wind power parks to secondary control 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 for - automatic activation, jointly, of the secondary control reserve (aFRR) and detecting the connections and implications for redispatching. Analysis of controllable consumers for load modification for industrial, commercial consumers, industrial platforms with self-generation but also renewable sources with installed capacities above 1 MW;
- Identifying the reserves and participating entities, the processes to be elaborated, the data necessary to be exchanged for secondary control (aFRR) and the redispatching capacities;
- Identifying the requirements with respect to interactions in-between platforms that aggregate aFRR and analysing the cyber security requirements for data transmission;

INTERRFACE European research project

"INTERRFACE – Interface aRchitecture to provide innovative grid services for an efficient power system" project under the Horizon 2020 framework programme, and axis LC-SC3-ES-5-2018-2020: TSO-DSO-Consumer: Large-scale demonstrations of innovative grid services through demand response, storage and small-scale (RES) generation, was one of the two projects which were approved in the summer of 2018 under this axis.

There are 42 partners in the project consortium and the project began in January 2019, will be developed for 48 months and it aims at demonstrating an Interoperable Architecture of Network Services at pan-European level (ASRIE), which will become an interface between the electric power system (TSO & DSO) and clients (consumers), which will enable their coordinated operation and service procurement by all the players involved into this chain. The latest generation of technologies will be developed and applied under this project relying on "Blockchain" and "Big data management", which will provide new opportunities on the Energy Market as well as benefits for the integration of renewable sources, reduction of electricity costs, etc.

The project will provided the following novelty components:

- New services: market rules, coordination and flexible distributed allocation from distributed energy sources;
- Digital technologies: Internet of things, big data management, Blockchain, Novel AI;
- Advanced communication and information management technologies: which are meant to assist the plug-and-play

model for various services and tools on an IT platform sustaining the implementation of the Interoperable Architecture of Network Services at pan-European level (ASRIE);

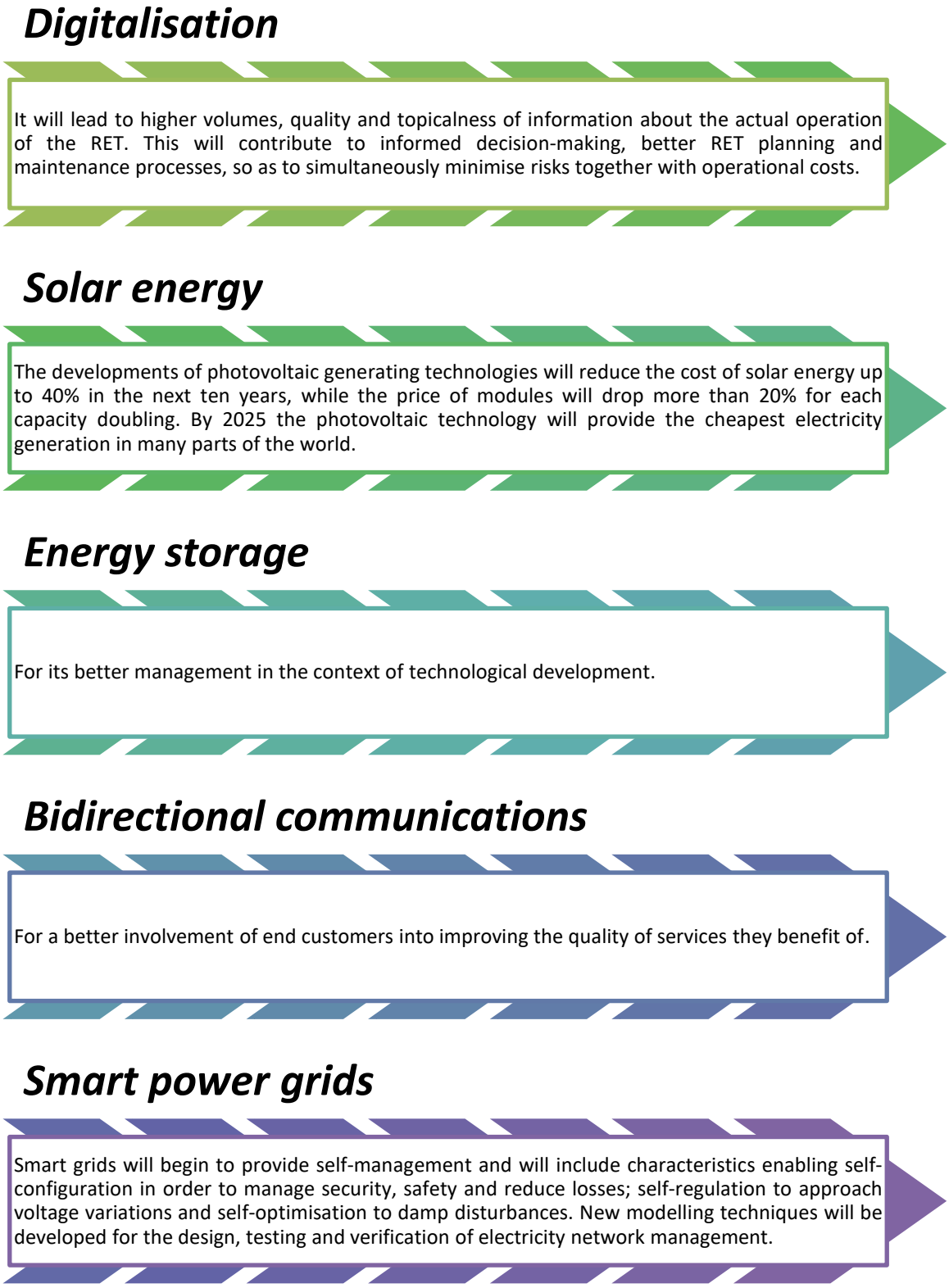
- Data models: will increase their confidentiality and will have a new structure, providing a heterogeneous unified exchange between various players from European;

- Changes and developments in the roles of players within SEN: especially as regards involvement, changing the role of consumers and the energy market by managing their needs and capabilities;

Research and innovation

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

The relevant technological changes that will establish together a new reality in the power systems are provided in the following figure:



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

Using HPC data extraction (High Performance Computing)	• Developing the society- and economy-wide sector specific to information technology will also impact power systems. Passing from a "*supply system based on copper*" to one increasingly integrating information technology, data management and nodes, which also sustains cyber-security issues acquires capital significance
Utilisation of new materials and technologies	• It is required to continue the efforts to use new materials, concepts, standards, instruments and algorithms that will process ever more information in order to address the security issue and that of power system stability
Developing methodologies amd instruments to operate the network closer to its physical limits, without endangering its security	• And this to better manage the network, closer to its physical limits
Greater use of renewable resources	• For a higher network resilience
Developments of other sectors	• Such as accumulator batteries that have brought about new solutions and challenges in the power system and the need to extend the range of options contributing to system services
Digitalising the power system	• Digitalisation of the power system providing at the same time a high level of operational safety by implementing enhanced cyber-security measures, • More active client participation on the energy market, • Implementing concepts specific to the smart grid architecture
Maintain system security and stability	• TSO-s will have to develop expert systems and support instruments for decision-making with a view to anticipate possible emergency circumstances, to provide early warning to system operators and suggest possible solutions with their success likelihood in real time.

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

The research & innovation strategy consolidates the Company's vision with respect to modernising the transmission network and providing the support necessary for the implementation of priorities which are included in the Development Plan, Administration Plan and Management, thus sustaining the implementation of digitalisation.

The main directions provided in the "Strategy of CNTEE Transelectrica SA for research and innovation" are as follows:

I. Innovation represents the success prerequisite to accomplish the Company's mission and vision;
II. Innovation will be a priority promoted for the Company's basic activities, adding plus value by digitalising processes, improving services and increasing the personnel's performance;
III. Innovative solutions, technologies, systems and concepts necessary for key activities will be implemented in general in the Company when:
    - They have been tested and validated under "*pilot projects*";
    - Or they have been critically assessed under completed projects in other organisations;
IV. Innovation will be the engine enabling the Company to implement the concepts of "*Learning organisation*";
V. Innovation and research will sustain "*Digitalisation*" as a major objective;
VI. In the Company research will focus on developing the following pillars:
    - National and international partnerships in fundamental and technological research (observance of basic principles, formulating concepts regarding technologies for experimental demonstration of such concepts, validating the technologies in laboratories);
    - Partnerships with solution and equipment suppliers for product / technology demonstrations (validating technologies in relevant and operational environments);
    - Partnerships under competitive procedures (to deliver and commission products and solutions);
VII. Personnel participation into events with important innovation & research component both in national and international frameworks (e.g. ENTSO-E, CIGRE, congresses, round tables, symposia etc.) will also include knowledge sharing, spreading best practices etc. within the Company, in an integrated regulated manner;
VIII. Structuring the general and specific objectives in correlation with the methodology promoted into ENTSO-E's research and innovation strategy;
IX. The Company's research and innovation strategy will comply with the centralised organisation model (steering committee, strategy administrator, putting processes under procedures, well defined roles, objective-centred management);
X. Research and innovation papers 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 to the following domains:

- The Company's strategic vision;
- Asset management;
- Improving performance indicators (KPI);

- Developing essential capabilities for network operation;
- Capitalising the opportunities to improve the Company's performance;
- Developing competence for Company personnel;
- Maintenance and operational activities;
- Developing partnerships with the holders of technologies and solutions;

Also the research and innovation strategy provides operationalisation for the vision of all stakeholders, in the sense of implementing a flexible infrastructure, open and interoperable under a digital portfolio where traditional processes, especially the manual ones are eliminated or digitalised so that information can be accessible in real time.

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

To sustain such objectives, beginning 2018 the Programme to implement the digital transformation concept (2018-2027) was approved and has been applied.

The actions and activities comprised under the portfolio of initiatives within the Digital Transformation programme targets increasing the Company performance by means of:

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

The strategy sustains that network digitalisation is clear opportunity for an efficient development and management of the power system, which has proved its profitability as regards improving service quality and operational costs.

In 2019 the following tactical documents were elaborated and approved in view of digitalisation:

- Part I: "Technical policy regarding asset digitalisation under the modernising initiatives within CNTEE Transelectrica SA";
- Part II - Concept of "Geographic Information System and Outage Management System";
- Part III – Concept of "Testing laboratory for digital technologies and personnel competence";
- Part IV – Concept of "Health Centre for RET Assets (CSA)"

The pilot project was launched "Refurbishment of Alba Iulia substation using the digital substation concept", being now in the procurement stage of design, which will demonstrate the following concepts:

- Technical condition monitoring
- Asset management
- Smart building
- E-Learning
- Health index
- Risk index
- Test laboratory
- OMS + GIS + Health centre

On the other hand Transelectrica has also initiated the "Development of IT&C capabilities: Infrastructure, Processes, Competence" project, which aims at:

- Implementing an IT&C governance framework and elaborating the VMOST (Vision, Mission, Objectives, Strategy, Tactics) documentations;

- Holistic auditing of the IT&C infrastructure, processes and competence,
- Developing the Company's organisational architecture,
- Analysing the feasibility and elaborating documents as necessary to implement eight strategic projects;

There are also other projects aiming at digitalisation that have been initiated:
- Feasibility Study "Optimising the operation of 14 (fourteen) 400 kV OHL existent within SEN, by installing on-line monitoring systems";
- Procuring 21 integrated monitoring systems for transformer units of Transelectrica's substations;

Asset management challenges for Transmission and System Operators (TSO)

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

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

• **Network planning** (the new asset management methods will enable a more efficient network planning by extending the infrastructure, which allows monitoring the condition of network assets, thus enabling a more performing maintenance and development programme);

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

• **Socio-economic impact** (asset management innovation can improve network development by balancing various risk issues in system operation and can contribute to reducing the defect rate within systems);

Concepts will be operationalised by means of the technical policy with respect to asset digitalisation under the modernisation initiatives within Transelectrica.

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

- Into the implementation of Company projects for development of RET assets which promote:
  - ✓ Fully the digital substation concept;
  - ✓ Partially the digital substation idea (concepts which sustain the Company's digital transformation);
- In the elaboration of design documentations by the:
  - ✓ Company;
  - ✓ Design service provider;
  - ✓ Work contractor;

The pilot project which will test the innovative concepts and technologies proposed under the strategic documents approved Company-wide is the refurbishment planned to be performed in 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 a performing asset management:

- Improving financial performance;
- Well consolidated decisions regarding investments and asset maintenance;
- Risk management in accordance with the operation of power systems;
- Improved services and results;
- Increased operational efficiency and effectiveness (Operational Excellence);
- Extending the lifetime of assets;

Periodical preventive maintenance activities relying on the reliability of network assets will sustain the network operators' decisions with a view to improve the general resilience of power systems, thus contributing to a higher integration of energy sources.

To improve risk management within transmission networks one needs implementing predictive maintenance policies based on more accurate estimations of asset lifetime.

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

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

Transelectrica has been publishing the third sustainability report, which continues the road began in 2018 using the previously acquired experience to present ever more relevant indicators for stakeholders.

This report has been executed in accordance with the Global Reporting Initiative Standards (GRI Standards – Core option) and it comprises the reporting interval 1 January 2019 – 31 December 2019.

The information included in the Sustainability Report of Transelectrica are not dealing in exhaustive manner with the non-financial Company aspects, however it relies on what stakeholders have notified as being domains of interest. This report brings about, besides updated information about indications known from the past, new items that place the Company on the line of institutions paying additional attention to globally important areas – environmental protection, employees' protection and welfare, reduced gender inequality or promoting sustainable activities.

We have further selected this reporting standard in order to make certain stakeholders receive relevant information in compliance with present-day trends worldwide, without limiting ourselves to compulsory subjects for reporting as specified in applicable legislation.

Thus furthering the reporting practice Transelectrica intends providing annual reporting of non-financial information.

The contact point for questions or for any other additional information is in the central office of Str. Olteni 2-4, Bucharest 3, Department of Non-Financial Reporting and Corporate Responsibility from Transelectrica.

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AGA – Shareholders' General Assembly
ANRE – National Regulatory Authority in the Energy domain
BVB – Bucharest Stock Exchange
CE / EC – European Commission
CPT – one's own technological consumption
CRE – Romanian Energy Centre
dB – decibels
EGRC – Company's risk management team
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
MW – Megawatt
OTS / TSO – Transmission and System Operator
RET – Electricity Transmission Grid
SEN – National Power System
SNA – National Anticorruption Strategy
TWh – Terrawatt hour
UNO-DEN – Operational Unit of the National Power Dispatcher