

An aerial photograph of a high-voltage power line tower situated in a lush green valley. The tower is a large, silver, lattice-structured structure. A dirt road curves around the base of the tower, where several vehicles (a red truck, a white van, and several cars) are parked. In the background, rolling green hills lead up to a range of blue mountains under a clear sky. The text 'Sustainability Report of TRANSELECTRICA 2020' is overlaid on the image. The words 'Sustainability' and 'Report of' are in blue, while 'TRANSELECTRICA' and '2020' are in white. A solid blue horizontal bar is positioned below the text.

# **Sustainability Report of TRANSELECTRICA 2020**



## Statement of responsible persons

The information provided in the Transelectrica's Sustainability Report of 2020, 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.

Chairman  
Cătălin NIȚU

Member  
Ovidiu  
ANGHEL

Member  
Corneliu Bogdan  
MARCU

Member  
Andreea Mihaela  
MIU

Member  
Marius Viorel  
STANCIU





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# Message from the Directorate

## Our performance with respect to sustainability

Dear shareholders, investors and partners,

Transelectrica publishes for the fourth consecutive year its Sustainability Report, elaborated by GRI standards, this being an opportunity to reiterate our commitment for policies centred on sustainability and lastingness.

The Company performs in accordance with corporative sustainable management and our objectives rely on a sound responsibility component. We want to develop and promote responsible attitude towards environment and surrounding communities as well.

Our activity focuses on public interest priorities; we pay great attention to existent lines of sustainability and sustainable development. Transelectrica is a strategic Company and holds important place in Europe besides the most Transmission System Operators of this region. We deem it a duty of the business environment, comprising both private and state-owned companies, to make sure their activities go sustainable-ward.

Transelectrica promotes an environmental policy by which we comply with assumed engagements. We propose using resources in a manner as reasonable as possible, to properly

manage waste resulting from the maintenance, upgrade and refurbishment of our installations, thus providing employee with motivation to respect the environment and observe applicable legislation.

Our daily activities and investment projects aim at contributing to developing a sustainable performant Romanian society.

In the last two years we acquired top positions in the ranks of Romanian companies in terms of sustainability. We would like to keep Transelectrica along the same coordinates, which will certainly contribute to developing the community.

In the context of a year that brought about many changes of the business environment, the non-financial performance of Transelectrica was sustained by sound corporative governance principles. Also Company efforts were high therefore in 2020 Moody's confirmed for the third consecutive year the rating Ba1 with positive outlook.

We want safe prospects for future generations. This is why in 2021 we will launch the Energy efficiency improvement programme and invest in infrastructure development which should provide renewable integration and higher use in the Romanian energy sector.

### Directorate of Transelectrica

Chairman  
Cătălin  
NIȚU

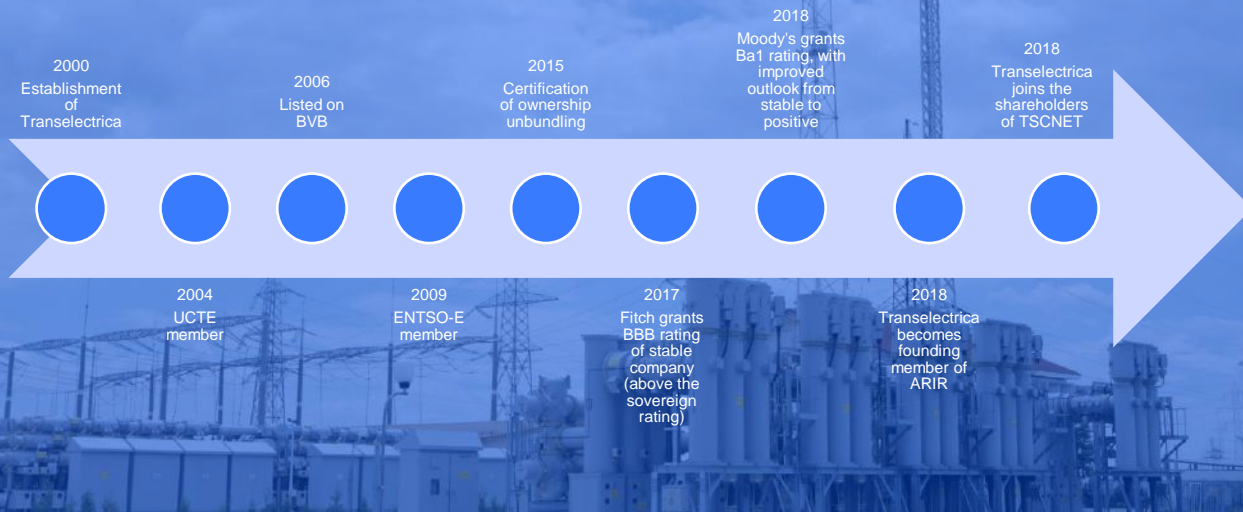
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# COMPANY PRESENTATION



## Company identification in European and national context

In the value chain of electricity activities Transelectrica holds the central position of transmission system operator with the mission to provide public electricity transmission services while maintaining the operational security of the national power system under non-discriminatory access conditions for all users.

Strategic Company in national and regional context, Transelectrica performs also the functions of: balancing market operator, metering operator and the operator that allocates interconnection capacities.

The business model corresponds to the standard profile of a Transmission and System Operator (TSO), a model designed all over Europe in the European energy legislation; it is applied in all community

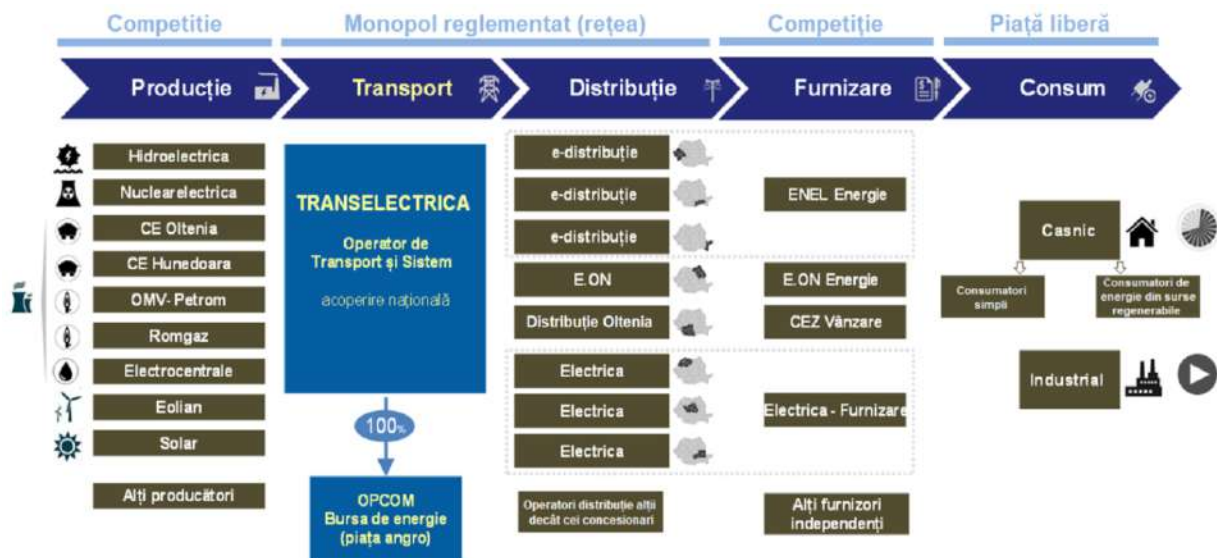
countries and transposed as such in the national legislation.

*Strategic Company in energy, Transelectrica has passed from national size to a pan-European approach of its activities*

Europe-wide the energy sector undergoes deep changes.

Emphasis is laid on the transition from a prevailing national development model of the energy sector to an integrated development coordinated at European level, which shall provide unitary continental development but can enable tailoring national specificities and following the legitimate interest of European states.





As integral part of the interconnected European system Transelectrica is responsible not only for the safe operation of the Romanian power system and supply of national consumers but next to the other Transmission System Operators has extended its competence and responsibility area all over Europe (36 countries, 532 million consumers).

### *Transelectrica, member of the European family of Transmission System Operators*

The Romanian power system has been integrated in the European electricity transmission system long before Romania's integration in the European Union. Since October 2004 Transelectrica has become partner of electricity transmission companies all over Europe, as member of UCTE, ETSO associations, the latter of which became ENTSO-E in 2009.

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

### *Transelectrica, member of TSCNET and JAO since 2018*

In August 2018 Transelectrica became member in the Regional de Security Coordination Centre TSCNET Services GmbH by joining its shareholders and of the European Joint Allocation Office JAO SA as well in December 2018.

TSCNET was established to serve the Transmission System Operators in the eastern-central-western European region in view of the coordinated implementation of European network codes, while JAO coordinates the bids for long-term capacity allocation, being designated Operator of the Single Allocation Platform (SAP).

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

Europe's energy and environmental policies, instrumented by successive legislative packages approved in all Europe are centred on increasing safe electricity supply; increasing energy efficiency; decarbonising the electricity generation mix by integrating renewable

resources and implementing efficient storage solutions.

A part of the European family by its ENTSO-E membership Transelectrica is a worthy partner in the elaboration and negotiation of legislative packages applicable to energy.

European network codes are documents regulating many operational issues of the synchronously interconnected power systems and the harmonisation and integration of national electricity markets, thus facilitating the implementation of the single European one.

Through its technical and operational expertise of Transmission System Operator Transelectrica has been active partner both in the elaboration of codes in ENTSO-E structures and in the negotiation stages in the European Commission and, through the specific ministry, in the European Parliament.

### *Transelectrica, strategic partner in the elaboration of the Development Plan for the European electricity transmission network*

Electricity transmission networks play an essential role in reaching European goals, especially as regards safe supply of consumers, constituting the internal electricity market and integrating renewable sources.

Within ENTSO-E there is integrated coordinated planning of pan-European transmission infrastructures (TYNDP: 10 years' European masterplan of the transmission network, comprising also assessed adequacy of pan-European power systems), main corridors and priority projects are found (list of PCI) which Regulation (EU) 347/2013 provides stimulative mechanisms for their expeditious implementation (competent authority responsible to facilitate and coordinate the licensing procedure for projects of common

interest, community technical assistance, e.g. Connecting Europe Facility).

### *Transelectrica, worthy partner in European projects*

In parallel with the negotiations for adopting the regulatory framework of energy there are projects developed by Transmission System Operators aiming at implementing the single European electricity market; applying European network codes or investigating specific challenges of the new legislative pack: Clean Energy Package.

Integrating the Romanian electricity market into the European one is a major objective in constituting the internal European market (IEM), priority target for Europe; this requires coherent measures and conjugated efforts of all entities involved: specific Ministries, Regulatory authorities, Transmission System Operators, and Energy Exchanges.

Having operated since 2014 in the 4M MC coupled market (Romania, Hungary, Slovakia and Czech Republic), Transelectrica has become partner in the projects developed in the eastern-central-western European region (CORE), while being active in south-eastern Europe (SEE), thus extending its implication and competence Europe-wide.

While performing in the market-coupling project and coordinated allocation of cross-border transmission capacities Transelectrica is also active in projects that develop and operationalise platforms providing trans-European transaction of balancing electricity.

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





## Licences and certifications

### *Concession and Licence*

Transelectrica has got concession over the goods belonging in the state public domain, namely the national electricity transmission network (RET), being a public utility Company.

The concession over RET and the lands it is located on was granted for 49 years under concession contract 1/29.06.2004, concluded between the Ministry of Economy and Trade as conceder authority and Transelectrica, in capacity of concessionnaire.

The Company performs as Romania's transmission system operator according to Licence 161/2000 to provide electricity transmission services, system services and balancing market administration, granted under Decision 865 of 22.12.2000 of the president of the National Regulatory Authority in the Energy domain, with later amendments and additions.

The Licence holder is the single provider of public electricity transmission and services for all RET users and system services for all SEN users.

The licence was granted for 25 years, being valid until 22.12.2025. To keep it valid the licence holder observes the specific conditions and the general licence terms.

Specific conditions are established in the last update of ANRE Decision 865/22.12.2000, namely ANRE Decision 571/08.04.2020, its content being also available on the internet page of Transelectrica(<https://www.transelectrica.ro/web/tel/licente-si-autorizatii>).

The general terms associated to the licence are approved by ANRE Order 104/22.10.2014, in accordance with the provisions of article 8 para (2) and article 10 para (2) let. c), d) and f) of the Electricity and natural gas law 123/2012 with later amendments and additions. This is integrant part of the licence and contains data about the licence holder's rights and obligations, on control and sanctions, licence suspension or withdrawal, licence amendment, communication means, rates and contributions.

### Certification

In accordance with the provisions of article 31 the Electricity and natural gas law 123/2012 with later amendments and additions, ANRE certifies the transmission system operator (OTS) of the National Power System according to a certification procedure which ends by the Authority's issuing a final TSO certification decision.

In accordance with the final Notice 7053/12.10.2015 of the European Commission, in accordance with article 3 para (1) of Regulation (EC) 714/2009 and article 10 of Directive 2009/72/EC, ANRE has ascertained Transelectrica has complied with

legal requirements of certification as transmission system operator of the National Power System, according to the ownership unbundling model, while ANRE's Regulatory Committee approved the certification of the National Power Grid company Transelectrica SA, issuing ANRE Order 164/07.12.2015 in this respect.

The certification requirements which have to be met by the transmission system operator are provided in article 34 of Law 123/2012 and ANRE Order 104/2014 approving the general licence terms, Chapter III, Sectionea 11, articles 46-49.

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



### Mission

Providing under sustainable conditions the public electricity transmission and system services for all users of the electricity transmission grid, under non-discriminatory terms in order to maintain the safe operation of the national power system. Keeping a key role on Romania's electricity market and on that from the south-eastern European region, supporting the operation and integration of electricity markets. Providing sustainable operation, maintenance, upgrade and development of the electricity transmission grid in view of maintaining the safe operation of the national power system, under energy efficiency and qualitative conditions.



### Vision

Taking into account that Transelectrica is found at the cross-road of eastern-central-western European (CORE) and south-eastern (SEE) regions the Company intends becoming an inter-regional integration factor, thus contributing also to increased security and sustainability at pan-European level.

In terms of corporate management Transelectrica plans being an integral part of the society as well, relying on sound principles, promoting responsible people in its team and sustaining value development in all its structures



### Values

The values used in all activities are as follows: sustainability, integrity, professionalism, respect, and social responsibility. Opinion diversity is appreciated in the entire Company regardless of hierarchies and we deem that exchanges of opinion can be a development engine.

## 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 consumption, the generation fleet and electricity exchanges; every 2 years it elaborates a Development Plan for the following 10 successive years, submitted for approval of ANRE and of the network owner. In 2020 the RET Development Plan was elaborated for 2020-2029, including all updated data for this interval.

The RET development plan is public document providing the main aspects of the

current state of affairs and forecasted RET development in the following ten years, which is provided to all stakeholders.

The RET development plan takes into account the requirements and priorities of the National Energy Policy. They constitute determining references to identify priority guidelines and to forecast the development trends of the power sector considered for planning.

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

The Company's development strategies have been aligned in complement

to the European ones. Thus Transelectrica develops projects of major significance for the European network in the electricity network it operates, which are included in the list of projects of common interest (PCI).

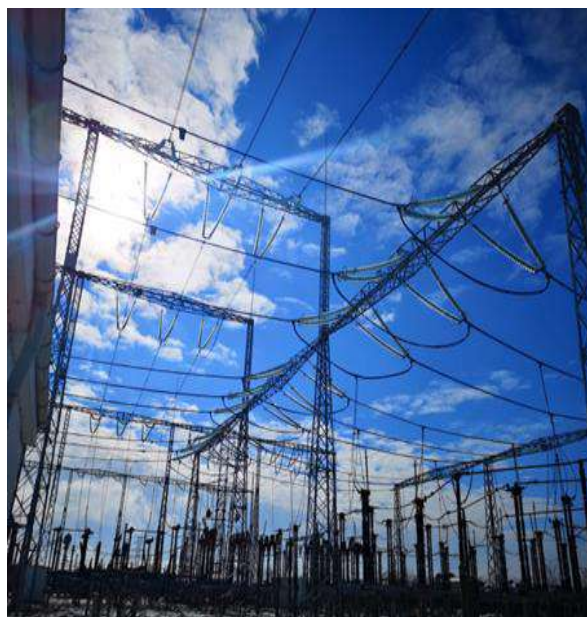
## Main activities

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

Key transmission system operator on the Romania and regional electricity market Transelectrica has got attributions to manage and operate Romania's electricity transmission system and to secure electricity exchanges between Romania and the countries it is interconnected with in central and eastern Europe, in its capacity of ENTSO-E member.

In accordance with licence terms Transelectrica carries out 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 has been 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 31-12-2020\***

SHAREHOLDER	SHARES	QUOTA (%)
Romanian State	43.020.309	58,689
Pavel Holding	4.753.567	6,484
Privately Managed Pension Fund NN/NN Pensii SAFPAP SA	4.007.688	5,467
Other legal person shareholders	16.305.068	22,244
Other natural person shareholders	5.216.510	7,116
<b>TOTAL</b>	<b>73.303.142</b>	<b>100</b>

\*Shareholder Register and history of holdings can be found with the Central Depository SA

In the context of its implementation of good practice and corporate governance rules, 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.

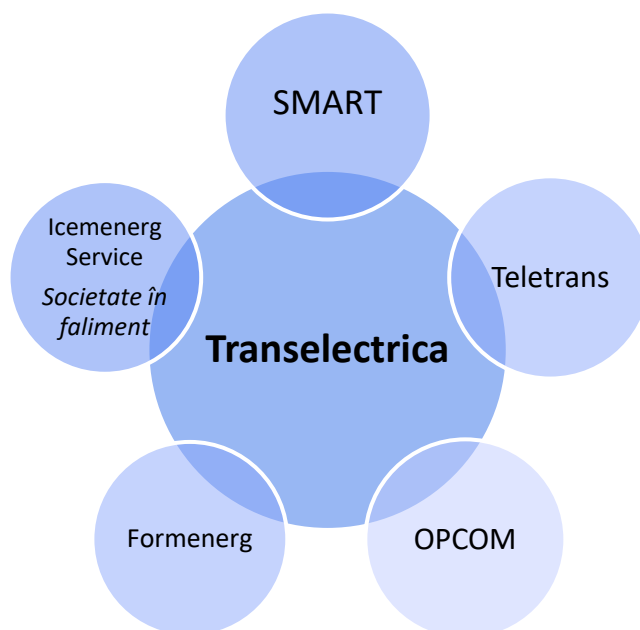
The diversity of shareholders and the inclusion in the main indexes published by BVB point out the transparency exigent requirements, relevance of information and its fast dissemination, as well as maintaining an uninterrupted dialogue with the investor public.

## 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).

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 listing requirements on the Bucharest Stock Exchange – including the provisions of the Corporative 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 organisation 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

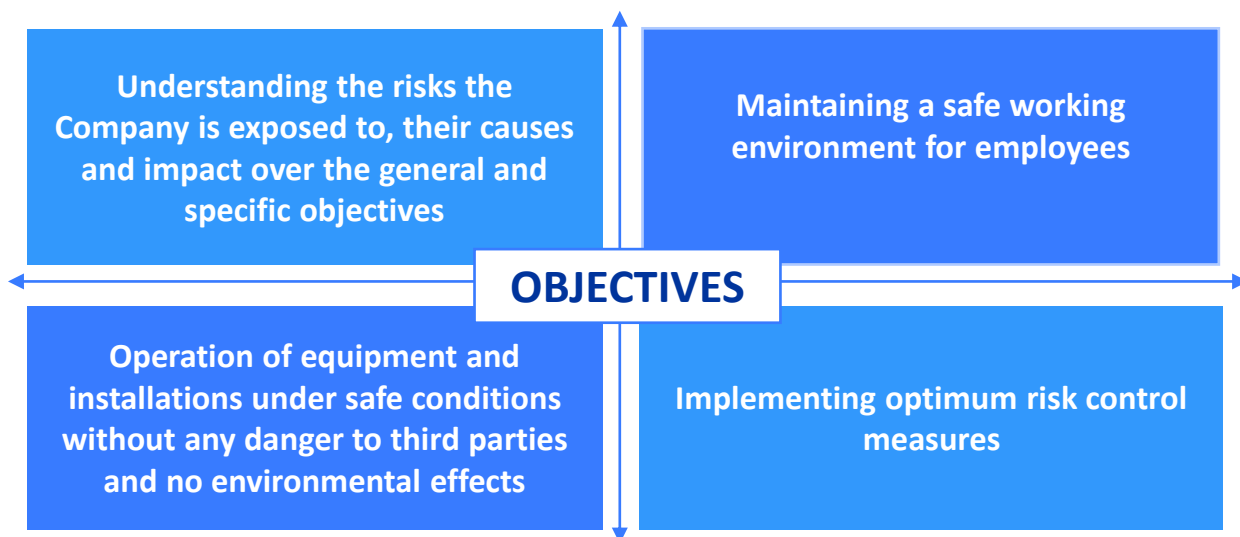
and health of its employees, as well as to protecting and safeguarding property and the environment.

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 management established the following strategic objectives with respect to risk management:



The established specific objectives 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 <sup>(102-33)</sup>

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.

## Keeping risks under control

Measures that have been applied to keep risks under control in 2020 in the main 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.

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



\* Each organisational entity (unit, division, department, and territorial transmission unit) has done it by identifying the best risk treatment operations in accordance with their risk management responsibilities, so as to record as low risk exposure values as possible in the given internal and external context.

In the main strategies consisted of:

1. Risk treatment to remove / diminish it at acceptable level by means of measures, and
2. Risk monitoring;

Mention should be made of the following internal control instruments:

- Measures under procurement/ maintenance/ investment/ professional personnel training programmes;
- Elaborating or reviewing procedures;

- Changing the processual and structural organisation;
- Performance indicator attached to the objective;
- Redistribution of personnel;
- Elaborating or updating databases;

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.

Control measures of organisational entities (unit, division, department, territorial transmission unit) have been fully implemented or under implementation.

Consequently in 2020 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.

## Relevant indicators

### Key figures



*\* The amount associated to the 10 years' development plan represents the total investments planned in the 2020-2029 edition of the RET Development Plan*

### Rating

In 2020 Moody's confirmed Ba1 rating with positive outlook granted in 2019, 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 with low indebtedness;
- Continuous improvement of the regulatory framework;
- Governmental support in case of financial difficulty;

Estimations are such trend should further continue in the years to come, given the stability shown by the Company.

## Relevant non-financial indicators (203-1, 202-1)

381 million lei Total amount of investment contracts signed in 2020	2.368 million lei Total revenues in 2020
937.5 GWh / 985.51 GWh One's Own Technological Consumption 2020/2019 (gross electricity)	114 million lei Net profit in 2020
61.0TWh / 59.4 TWh Electricity consumption / generation in 2020	185 million lei Total minor & major maintenance in 2020
97.5% Achievement degree of minor and major maintenance planned for 2020	

\* Preliminary data

## Investments in 2020 (203-1)

Main investment objectives commissioned by 31.12.2020

No.	Objective
1	100 MVAR, 400 kV shunt reactors for the 400 kV substations Arad, Bucharest and Bradu
2.	Upgrading the 400 (220)/110/20 kV substation Munteni - Stage commissioning
3.	Replacing transformers and autotransformers (AT) in electric substations (stage II, step 2) - Stage commissioning
4.	Refurbishing the 220/110/20 kV substation Ungheni - Stage commissioning
5.	Refurbishing the 220 kV substation Otelarie Hunedoara
6.	Refurbishing the 220/110/ kV substation Iaz – Stage commissioning
7.	Upgrading the 110 kV substations Bacau Sud & Roman Nord of the 400 kV axis Moldova - Stage commissioning - 2 <sup>nd</sup> stage
8.	Integrated Security System in electric substations - stage IV - the 400/110/20 kV substation Bucharest-Sud
9.	Research & development centre of live work (LW) technologies and fast intervention into SEN – stage I
10.	Refurbishing the 400/110/20 kV subst. Domnesti - Stage commissioning: the 110 kV GIS
11.	Replacing the EMS SCADA AREVA system components
12.	Refurbishing the 220/110 kV substation Craiova Nord - Stage commissioning



## Difficulties met

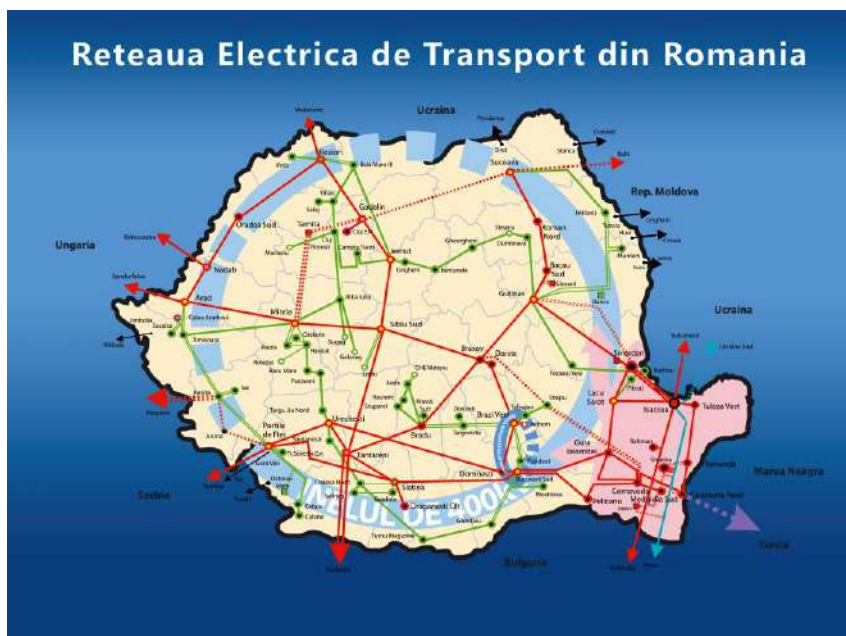
Taking into account the epidemiologic context generated by COVID-19 (coronavirus) spreading a great number of general contractors under work execution contracts transmitted notifications about slowing down the pace or even suspending the works.

Consequently addendums were concluded to extend 2 ÷ 6 months the execution contracts.

However, analysing the value of achievements in the studied time (January – December 2020) it follows such epidemiologic crisis had no negative impact on the 2020 Annual Investment Plan.

## Benefits of achieving this wide-scale investment programme

- Higher operational safety of SEN;
- Facilitating electricity transmission from excess generation areas to consumption regions;
- Obtaining 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;
- Reduced operational and maintenance expenses;
- Higher electricity quality, improved performance indicators;
- Reduced technological consumption within RET, higher energy efficiency;
- Introducing new technologies, applying 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 permanent 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 BVB;
- Periodical meetings with investors and financial analysts;

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

The information provided in this report with respect to the events and activities developed 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 against that provided by Transelectrica (involved governmental factors shareholders Company

employees the employees of, other companies of the energy sector, analysts, electricity producers, electricity distributors and suppliers, end electricity consumers, international companies with similar activities, public authorities in the same domains, representatives of academic educational establishments in the energy domain, experienced journalists in similar domains). 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 2020 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 steps, up to the level of strategic actions.

Last but not least, the stakeholders identified in the previous report have been consulted throughout 2020 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

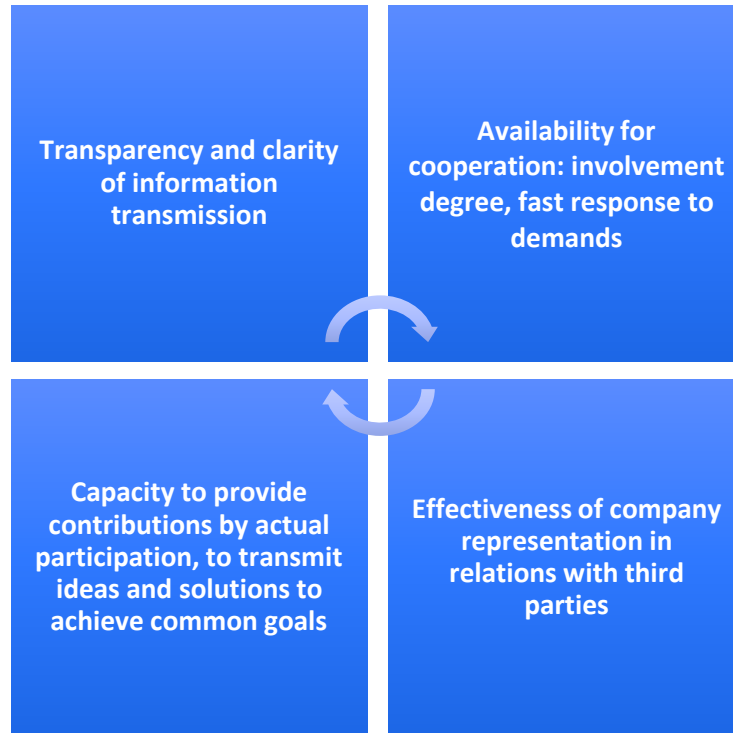
the other reports as well as to outline the Company's perspectives in sustainability terms.

Each category of the previously mentioned ones is approached in the report and new information is added in every reporting session, with direct reference to the requirements stated by stakeholders and their important topics.

### List of material topics

Domain	Material topic	GRI / own indicator	Related chapter
Corporative governance	Governance system	102-18	1
	Assuming the corporative 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	Own indicator	1
	Risk management	Own indicator	1
	Energy efficiency	302-1, 302-4	7
	Strategic objectives of research and innovation	302-4, 302-5	8
Social responsibility to 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	Own indicator	3
	Corporative social responsibility policy	Own indicator	5
	Dialogue between Company and society	Own indicator	1
	Community needs	413-1	5
	Involvement in society	203-2	5
	Employee information, consultation and trade union relation	403-4	2
Environment	Environmental management system	308-2	4
	Risks, opportunities and environmental costs	Own indicator	4
	Water, energy and water management	Own indicator	4
	Prevention and limitation of environmental impact	Own indicator	4

## Communication, cooperation, representation



### Ethics in business (102-17)

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

Throughout 2020 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.

Taking into account the epidemiologic context existent throughout 2020 limits were applied to travels or meetings, in relation with the National Anticorruption Strategy.

#### 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 of corruption fighting, professional obligations but also to complying with the legal framework and internal regulations.

The review for the Code of Ethics and Personnel Conduct began in 2020.

The Code of Professional Ethics and Personnel 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 2020, Transelectrica has permanently endeavoured to comply with applicable provisions.

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

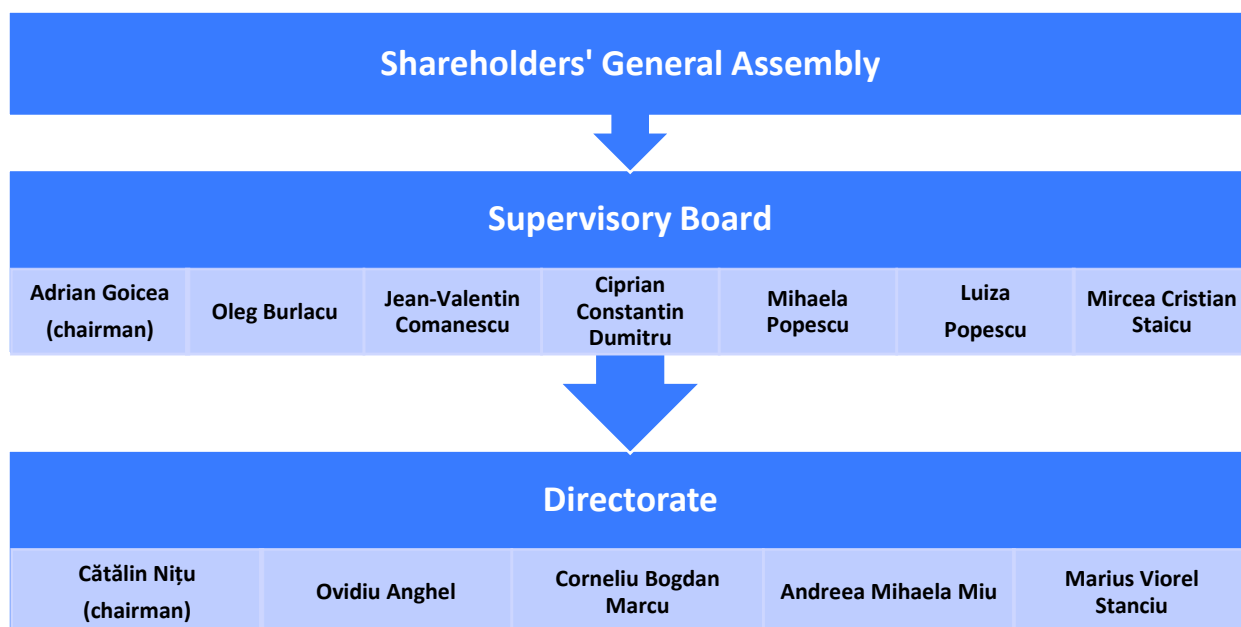
## Anti-competitive or anti-trust behaviour (206-1)

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 2020 there have been no legal suits in this respect.

## Corporate governance (102)

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



\*on 11.03.2021

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 corporative governance of public enterprises. Supervisory Board members in office on 31.12.2020 have a provisional mandate of 4 months, which cannot exceed the completion date of the selection procedure.

In accordance with OECD principles, an effective corporative 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 corporative governance regime should protect and facilitate the exercise of shareholders' rights and to provide fair treatment of all shareholders, minority and foreign ones included. In previous years substantial changes were made in the Articles of Association with a view to increase the effectiveness of corporative governance Company-wide by resorting to the applicable legal framework, and also 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 Corporative Governance Code of the BVB. In accordance with the BVB requirements, Transelectrica made public the Company's reviewed Corporative Governance Regulation to the investors.

The compliance with the corporative governance principles is reflected in the conformity statement with the Corporative 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.

Competence delegation pertains to, for instance:

- a) Approving certain kinds 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 cap;
- 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 specific national and international organisations and bodies.

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 2020 Transelectrica got affiliated to 12 national and international associations, organisations and bodies in the domain, as follows:

- **ACUE-PD** - Association of Utility Companies in Electricity Generation & Distribution ([www.acue.ro](http://www.acue.ro));

**Date of Transelectrica affiliation: 2015**

- **ALSTR** - Live Work Association of Romania ([www.smarsb.ro/alstr](http://www.smarsb.ro/alstr))

**Date of Transelectrica affiliation: 2000**

- **AmCham** - Association of the American Chamber of Commerce in Romania ([www.amcham.ro](http://www.amcham.ro));

- **ARIR** – Association Liaising with Investors at Romania's Stock Exchange ([www.ir-romania.ro](http://www.ir-romania.ro))

**Date of Transelectrica affiliation: 2018**

- **ASRO** - Standardisation Association of Romania ([www.asro.ro](http://www.asro.ro));

**Date of Transelectrica affiliation: 2008**

- **CIGRE** - International Council of Large Electricity Networks – It is 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](http://www.cnr-cme.ro)) – non-governmental organisation member of the World Energy Council (CME) since 1924;
- **CRE** - Romanian Energy Centre ([www.crenerg.org](http://www.crenerg.org)) Projects developed by CRE in cooperation with Transelectrica:
- **RE-SERVE** – *Renewables in a Stable Electric Grid*
- **CROSSBOW** - *“CROSS BOrder management of variable renewable*

*energies and storage units enabling a transnational Wholesale market”*

**Date of Transelectrica affiliation: 2011**

- **ENTSO-E** - European Association of Transmission System Operators for Electricity ([www.cnr-cme.ro](http://www.cnr-cme.ro)) - It is the cooperation structure of Transmission System Operators (TSO) of Europe both at pan-European and regional level, 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. European TSOs participation to ENTSO-E is regulated by the applicable European legislation (Regulation 943/2019).

**Data afilierii Transelectrica: 2000.**

- **LWA** - International Live Work Association
- **SIER** - Society of Power Engineers in Romania ([www.sier.ro](http://www.sier.ro))

**Date of Transelectrica affiliation: 2000**

- **IRE** – Association of the National Romanian Institute for Study on the Development and Use of Energy Sources ([www.ire.ro](http://www.ire.ro))

**Date of Transelectrica affiliation: 2019**





# Rewards and distinctions the Company was awarded

TRANSELECTRICA SA

All through 2020 the Company or Transelectrica representatives were awarded prizes and distinctions as follows:

**Event: AR&IR Gala** organised by the Association Liaising with Investors at Romania's Stock Exchange - ARIR on 19 October 2020

Institutional investors of the whole world that are active on Romania's capital market have carefully assessed the companies listed on the Bucharest Stock Exchange by means of Institutional Investor and following their vote **Transelectrica was designated the best Company in Investor Relations terms.**

**Transelectrica obtained in 2020 as well the Bronze Level Recognition in the top of the most sustainable companies on the local market made by The Azores.**

Thus Transelectrica is further 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 2020" study.

The Azores este o agenție independentă de consultanță ce analizează performanța și nivelul de transparență privind Sustenabilitatea Corporativă în rândul coThe Azores is an independent consultancy agency studying the performance and transparency level as regards corporate sustainability among companies in Romania.

**Event: Financial Intelligence Awards Gala**, organised by Financial Intelligence on 19 October 2020

This year's edition of the Financial Intelligence Gala provided Transelectrica with the **Excellency Prize for the implementation of investment projects.**

# OUR PEOPLE – HUMAN RESOURCES DEVELOPMENT AND DIVERSITY

## Human Resource Strategy



### Vision

- Developing the human resource strategy in line with the Company's strategic objectives and with the critical employee needs;
- Developing a working environment suitable for professional evolution, based on profile competence, a personnel motivation strategy, developing the brand of successful employer, turning dynamic the personnel administration processes meant to draw new resources and motivating the professional development of existent resources (recruitment, Company integration, performance and career management).



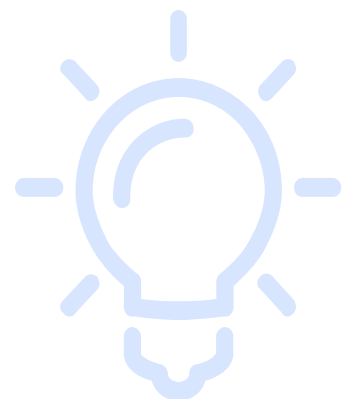
### Objectives

- Initiation, development and implementation - project to develop organisational culture;
- Developing a library of professional and behavioural competence both at managerial and executive level, where each competence should be defined and developed by 3 levels (junior, standard, senior);
- implementing the performance and career management system;
- Physic and electronic archive of employee files in order to develop a database enabling the transfer of as many HR processes as possible to online;
- Standardisation and online transfer of documents specific for personnel administration.



### Action lines

- Implementation and capitalisation of the Human Resource Senior Expert (HR BP) role;
- Reorganisation of the Human Resource Department based on Company objectives and on those assumed by the Division;
- Reducing bureaucracy of the Human Resource Department;
- Restoring the balance between the volume of personnel administration versus personnel development activities, which rates now about 80% vs 20% in favour of administration;
- Developing competence for the HR Department so that it can develop the proposed projects.



## Professional training strategy in 2020

The 2020 professional training strategy targeted providing professional qualification to employees in order to comply with the Company's operational and strategic objectives. The 2020 Annual Professional maintenance, training and qualification programme identified the professional training needs in correlation with the professional activities and attributions specific to Company employees, as well as with the organisation's business targets.

The epidemiologic context generated by SARS CoV-2 all along 2020, the measures applied by competent authorities with a view to limit risk cases associated to the infection with the new coronavirus, to protect health and reduce COVID-19 spreading, a cautious attitude in employees' protection and safety while maintaining business had significant impact on professional training sessions compared to last years. This is why the professional training strategy had to be tailored to the state of affairs, therefore training courses were organised as only strictly necessary in the fore-mentioned epidemiologic context.

Consequently objectives were reviewed targeting the main action lines:

- Providing performance of training/qualification / improvement courses for personnel that requires licensing/relicensing for professional activities but also urgent training sessions;
- Tailoring periodical training sessions by local measures, which should reduce contagion risk given the present circumstances;
- Finding alternative methods to provide professional training which prevent or reduce the contamination risk;

Aiming at the main goal of providing professional training and thus enabling an accessible attractive competitive relevant training system for Transelectrica objective and, studying the trend of professional course trainers to provide sessions online, in 2020 debates were initiated to implement online courses in the Company.

## 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 2020 no discriminating 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).

In this context in Transelectrica the percentage of women hired in executive positions is over 28%, those occupying top management in 2020 covered 35% of the total, while in middle management over 23%. At the same time mention should be made in 2020 one of the five managerial positions in the Directorate and two of seven in the Supervisory Board were taken by women.

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.

Moreover the Company numbers 5 disabled employees, therefore no such discriminating incident was recorded in 2020.

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



In terms of employees' dynamics, in 2020 we hired 103 persons, while 109 left the Company, so the medium age was 47

among employees on 31.12.2020. Still in 2020, 31 women and 10 men were on leave for child rearing, benefiting of the dedicated articles thereof both in the Labour Code and in the Collective Labour Contract.

	Structure by gender categories (distinct for executive, leading and management positions)					
Type of position	Total number of employees	Age			Gender	
		Up to 30	30-50	Over 50	M	F
Top management personnel	101 (4.99%)	0 (0%)	51 (50.49%)	50 (49.51%)	65 (64.36%)	36 (35.64%)
Leadership (except top management)	306 (15.14%)	4 (1.13%)	153 (50.00%)	149 (48.69%)	233 (76.14%)	73 (23.86%)
Executive personnel	1614 (79.86%)	111 (6.87%)	812 (50.31%)	691 (42.81%)	1268 (78.56%)	346 (21.43%)
Total personnel	2021	115 (5.68%)	1016 (50.27%)	890 (44.04%)	1566 (77.49%)	455 (22.51%)



# Performance analysis on the job and the remuneration policy

(102-35, 102-36)

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:

- 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, after an annual assessment of performance carried out according to criteria that have been established and communicated at the beginning of the assessment cycle;

Facilities granted to employees refer especially to applying the fore-mentioned principles and are included in a collective labour contract negotiated between the executive management and unions.

## 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 560 Company employees benefitted of training programmes in 2020*

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 2020 Company employees participated to training programmes (delivered by providers of professional training services) from various activity domains.

Mention should be made also about the results and benefits of professional training programmes carried on in 2020:

- Certification of knowledge or, as applicable, extending the validity of permits for the colleagues (SSM coordinator, electricians of various classes, security manager) who require, during activity, certification proving theoretical and practical qualification according to requested standards as well as to Company standards;

- Course attendance and licensing as site manager for installation, industrial equipment for 24 employees, thus approaching the Company need generated by investments (which are considerable to refurbish several substations);
- Although the epidemiologic context generated by SARS CoV-2 in 2020 required

a set of restrictions impacting training activities, solutions were to provide periodical training to UTTs by joint personnel. Thus such periodical joint personnel training were provided to 543 people in 2020.

In 2020 there was no course or training or any other session regarding corruption fighting or bribe.

## Internships

Transelectrica sustained further in 2020 as well the professional training of young generations of specialists in the energy domain by annual internships.

*In 2020 students from Bucharest and from the country participated to internships in 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 2020 students both of Bucharest and from the country attended the internships of Transelectrica. au luat parte la stagii de practică studenți atât din, cât și din țară. From among the partners of Transelectrica with respect to internships were the University Gh. Asachi Iasi, Faculty of Electric Engineering, Energy and applied Information; Polytechnic University of Bucharest, Power Engineering Faculty; Pitesti University, Energy Faculty & Nuclear Technologies, 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 2020, nowadays as well almost all Company employees are trade union members, showing they recognise the utility of a 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.

Taking into account the Company profile no specific writs were necessary as regards the employees' freedom to associate.

# RESPONSIBILITY TO EMPLOYEES

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



The entire training process is developed in accordance with article 20 of Law 319/2006 Labour security and health law, with later amendments and additions, with Decision 1425/2006 approving the Methodological Norms to apply the provisions of the Labour security and health law 319/2006, chapter V - Workers training on labour security and health and the internal Operational Procedure code TEL 18.02 "Employees' training on labour security and health".

Prevention and protection departments have been established, dedicated to labour security and health (as per the Labour security and health law 319/2006, Section 2), under methodologic coordination of the Integrated Management Department with attributions in compliance with applicable legislation.

A person was designated in this Department to provide labour security and safety that periodically manages such activities.



Training activities are unitary, periodical training is united half-yearly and SSM topics cover 3 years' cycle.

Employee training is performed by the working place managers using topics approved by Company management and recorded in individual training forms.



Labour safety and security activities are managed by UMICA – DMI, Company-wide.

Workers' instruction in labour safety and health comprises 3 stages defined by specific legislation:

#### Introductory-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 in case of monthly and half-yearly training, under guidance of personnel from prevention and protection departments dedicated to labour security and health.





## Preventive actions (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 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:

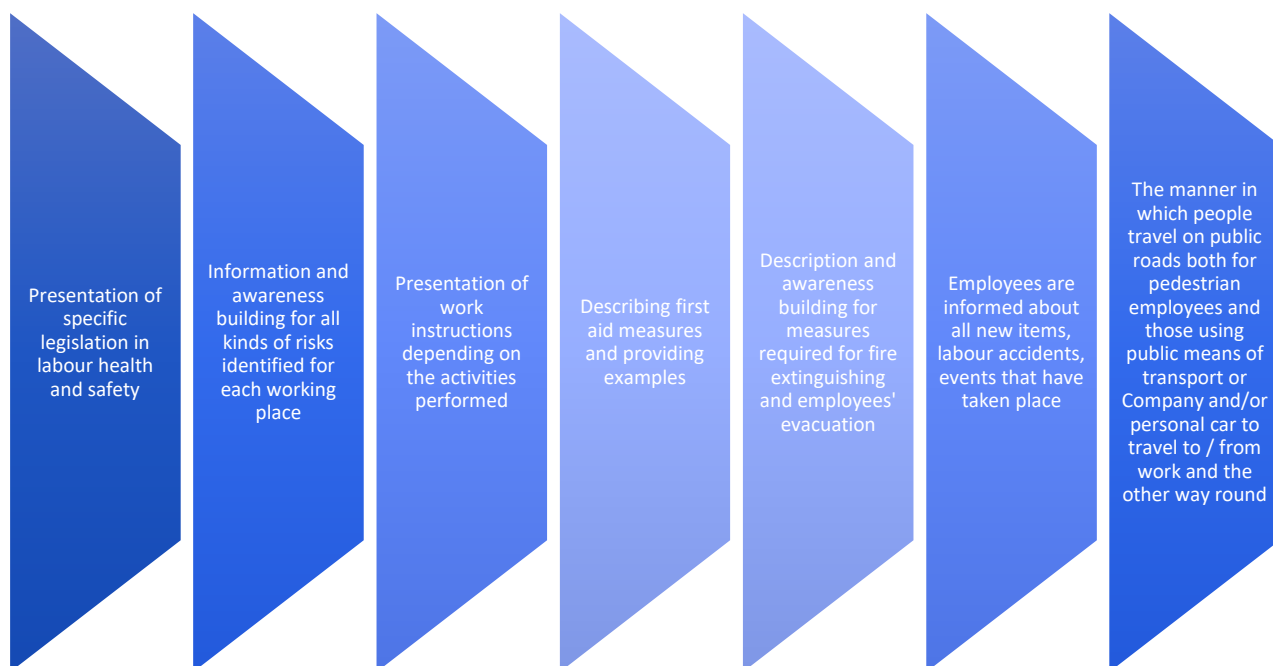
- Annually, minimum one training course for every employee;

- 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 21 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.

Various training domains are approached as follows:



Trainings are provided at different periods with all personnel about their travel to and from work. Each employee fills in a Route Form upon recruitment, which provides the travel time and route.

The employees responsible for prevention and protection services dedicated to labour security and health make up the structure dealing also with labour accidents.

One work accident was registered in 2020 followed by temporary work incapacity and a light accident which has not resulted in temporary work incapacity.

In 2020 a number of 120 days was recorded for medical leaves registered after work accidents.

There has been no death caused by accidents on the job and there are no cases of employees with occupational illness or high exposure to professional disease.

There has been no death caused by accidents on the job and there are no cases of employees with occupational illness or high exposure to professional disease.

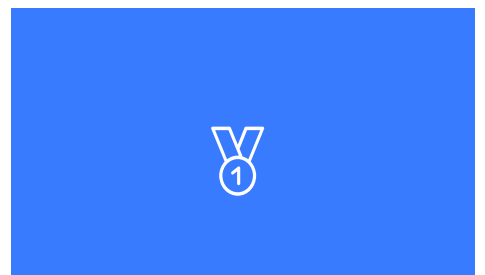
Moreover there is permanent dialogue between the executive management and unions to cover occupational health issues and the collective labour contract clearly mentions this domain.

## Organisation of mixed (management – employees) SSM committees and relevant activities in 2020 (403-1)

Labour health and security committees are established in accordance with applicable legislation articles 16, 17, 18 of the Labour security and health law 319/2006 in order to consult the workers and involve their participation to discussions on all labour security and health issues. Labour health and security committees operate based on their own operational regulation.

The Company-wide Labour Health and Security met 2 times in 2020. From among the problems debated according to the agenda of each meeting there are: endorsing the annual

labour security and health programme of the Company; analysis of labour security and health issues specified by employees from branches and DEN; supervision of the achievement degree of measure plans regarding labour security and health; endorsing the operational procedures for labour security and health; the manner in which labour conditions are provided, individual protection equipment for workers, analysis of last year's labour security and health activities based on the report and endorsing such report.



# RESPONSIBILITY TOWARDS ENVIRONMENT

## Environmental management system<sub>(103-1, 103-2, 103-3)</sub>

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 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



## Risks, opportunities and environmental 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. Accidental leaks can occur of certain chemical substances with 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 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 RELATED TO CONSTRUCTION

Type of impact	Modes of occurrence (effects)
<b>Physical</b>	<ul style="list-style-type: none"> <li>• Impact on soil by opening new access routes, topsoil removal and excavations</li> <li>• Land occupation by site organisation, storage places included</li> <li>• Impacting the flora (by tree cutting)</li> <li>• Impacting the fauna (by habitat fragmentation)</li> <li>• Impacting birds (by constituting aerial obstacles located in their flight corridor)</li> <li>• Generating waste (porcelain, glass, concrete, metals, used oil, packages, rubble, etc.)</li> <li>• Impacting the population and fauna by the noise produced by equipment, transportation means, etc.</li> </ul>
<b>Chemical</b>	<ul style="list-style-type: none"> <li>• Soil and/or water pollution by accidental leaks of fuel, oil and other chemical substances</li> <li>• Air pollution by means of:               <ol style="list-style-type: none"> <li>a) Flue gas emissions (<math>\text{SO}_x</math>, <math>\text{CO}_x</math>, <math>\text{NO}_x</math>, COV, suspended powders) from heating installations or transportation means</li> <li>b) Sulphur hexafluoride emissions (<math>\text{SF}_6</math>) – accidental leaks during gas handling or because of improperly tight equipment</li> <li>c) Powdery emissions because of construction-installation work</li> <li>d) Emissions of volatile organic compounds from paints and diluters, etc.</li> </ol> </li> </ul>
<b>Socio-economic</b>	<ul style="list-style-type: none"> <li>• Disturbance of social activities, including population moving out</li> </ul>

## ENVIRONMENTAL ASPECTS RELATED TO OPERATION-MAINTENANCE

Type of impact	Modes of occurrence (effects)
<b>Physical</b>	<ul style="list-style-type: none"> <li>Land occupation with OHL routes and substation locations</li> <li>Impacting flora by systematic vegetation removal</li> <li>Impacting fauna (fragmenting habitats, electrocution, etc.)</li> <li>Impacting birds and flying apparatuses (aerial obstacles located in their flight corridor, collision, electrocution, etc.)</li> <li>Danger of electrocution / burns when touching OHL / tower falling near or at road crossings, railroad, water, buildings, etc.</li> <li>Fire hazard from deteriorated insulation or from accidental conductors' getting in touch with objects or dry vegetation</li> <li>Impacting the population and fauna by the noise and vibrations from operation of RET installations or their vibrating</li> <li>Impacting the population and fauna by the noise generated by corona effects from high voltage installations</li> <li>Acoustic and luminous effects from corona phenomena</li> <li>Disturbance of radio and television systems produced by the electromagnetic field</li> <li>Electromagnetic field impacting telecommunication installations or other electric networks when they inter-cross or are found nearby</li> <li>Effects of the electromagnetic field over living beings</li> </ul>
<b>Chemical</b>	<ul style="list-style-type: none"> <li>Soil and/or water pollution by accidental leaks of fuel, oil and other chemical substances</li> <li>Air pollution by means of:               <ol style="list-style-type: none"> <li>Flue gas emissions (<math>\text{SO}_x</math>, <math>\text{CO}_x</math>, <math>\text{NO}_x</math>, COV, suspended powders) from heating installations or transportation means</li> <li>Sulphur hexafluoride emissions (<math>\text{SF}_6</math>) – accidental leaks during gas handling or because of improperly tight equipment</li> <li>Ozone and nitrogen oxides – corona effects at high voltage</li> <li>Sulphuric acid vapours – from accumulator batteries</li> </ol> </li> </ul>
<b>Visual</b>	<ul style="list-style-type: none"> <li>Impact over landscapes</li> </ul>
<b>Psychic</b>	<ul style="list-style-type: none"> <li>Fear caused by the proximity of RET installations and by their visual and luminous effects</li> </ul>

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 making 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**

The area taken up by electric lines and substations:

	Without safety area [m <sup>2</sup> ]		With safety area [m <sup>2</sup> ]	
	Substations	OHL	Substations	OHL
<b>Total Transelectrica</b>	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 flue gas - from motor cars, electric generating sets and 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.). High voltage OHLs 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.

As far as greenhouse gas emissions are concerned, SF6 leaks from the pieces of equipment managed by Transelectrica amounted to 158.2 kg in 2020, while the emissions of equipment not managed by Transelectrica are provided below:

Type of information	2020								TOTAL
	UTT	UTT	UTT	UTT	UTT	UTT	UTT	UTT	
	Bacau	Bucharest	Cluj	Constanta	Craiova	Pitesti	Sibiu	Timisoara	
Total SF6 capacity for equipment found on site (kg)	3090,2	25932,149	3071,9	8685,9	8708,82	5585,26	7412,54	3916,7	66403,469
Of which closed pressurised equipment * (kg)	3025,2	25900,149	2995,7	8685,9	8683,92	5585,26	7412,54	3911,7	66200,369
Of which sealed pressurised equipment ** (kg)	65	32	76,2	0	24,9	0	0	5	203,1
Total capacity of new equipment filled on site (not by producer) (kg)	173,1	3443,049	0	186	2264,2	0	0	345,6	6411,949
Total capacity of equipment no longer used (kg)	36,4	71	0	349	378,1	55,5	0	4	894
Emissions upon installation- SF6 quantity to fill new equipment (closed, pressurised) (kg)	0	0,121	0	0	0	0	0	0	0,121
Emissions upon use- SF6 quantity to refill the closed - pressurised equipment during service / maintenance (kg)	0	48	2,2	0	44,5	16	42,5	5	158,2
Emissions upon use- SF6 quantity recovered from closed - pressurised equipment during service/maintenance (kg)	0	0	0	0	0	0	0	0	0
Emissions upon disposal - capacity of equipment no longer used (kg)	0	0	0	0	0	0	0	0	0
Emissions upon disposal - SF6 quantity recovered from equipment no longer used (kg)	0	0	0	0	0	0	0	0	0
When did you begin using SF6 containing equipment	2002	1999	1999	1994	1995	1997	1965	1998	1965

The objective of 2021 is to reduce emissions below the previous year's and find methods to make such reduction sustainable in the long run, not only in just one studied year,

especially in the context of European recommendations and requirements.

#### **d) Sources of used water**

Electricity transmission does not generate technologically used water. The used water generated on the locations of RET installations are:

- 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;

To perform its activities Transelectrica used 34,894 m3 of water in 2020. The sources of drinking water and quantities used depending on source are provided below (expressed in m3):

Local water networks	23.250 m3
Underground water	10.329 m3
Other sources	1.315 m3

#### **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.

Waste generated in 2020 was disposed of / capitalised by means of specific companies.

Generated waste (tons)	Capitalised waste (tons)	Disposed waste (tons)	Stored waste (tons)	Waste management indicator: Disposed of, capitalised / generated waste
2691.22	277.80	1764.72	649.04	76% (compared to 84% in 2019)

### ***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 2020 measurements showed the values required by applicable norms have not been exceeded in electric substations and upon line crossings of roads, railroads and intensely populated regions.

### ***g) Acoustic pollution***

During construction noise can be generated 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.

Transelectrica SA defines and applies preventive and corrective measures to reduce the environmental impact of its installations

and activities. The various environmental conditions at each location of RET installations (overhead lines, electric transformer & connection substations, buildings) determine specific environmental impacts of each installation in different stages (design, construction & operation) therefore measures are defined for each individual case, depending on the conditions existend on location.

In 2020 no noise exceeding the maximum admitted level was registered.

### ***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.

In order to get birds away from OHL areas bird-repellent equipment is installed on

towers, above insulator chains, thus preventing the bird's sitting on the tower (protecting it against electrocution, and insulators from breaking) while deflectors are installed on OHL conductors (devices preventing birds sitting on OHL conductors) or painted boards, usually mimicking prey birds and thus reduce birds' impact with OHL.

### ***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 UTT Timisoara: 34 nests
- In UTT Bucharest: 4 nests
- In UTT Constanta: 31 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)

### Elaboration of 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

### Executing work

- 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);

### Procurement of services with respect to

- 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 to determine parameters were 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 2020 there were no significant leaks providing significant environmental impact.

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

Capitalisation		Disposal	
Recycle	Co-incineration	Incineration	Storage
<ul style="list-style-type: none"> <li>• Printer toner waste</li> <li>• Synthetic engine, transmission &amp; lubrication oils</li> <li>• Mineral non-chlorinated insulating and heat transmitting engine oils</li> <li>• Paper and cardboard packages</li> <li>• Plastic packaging material</li> <li>• Wood package</li> <li>• Glass package</li> <li>• Worn-out tyres</li> <li>• Oil filters</li> <li>• Brake plates</li> <li>• Ferrous metals</li> <li>• Plastics</li> <li>• Glass</li> <li>• Component with no specification</li> <li>• Other unspecified waste type for car maintenance</li> <li>• Dismantled equipment containing dangerous components</li> <li>• Waste of worn-out electric and electronic equipment (DEEE)</li> <li>• Components taken out of dismantled equipment</li> <li>• Lead-containing batteries</li> <li>• Alkaline batteries</li> <li>• Condenser batteries</li> <li>• Copper, bronze, brass</li> <li>• Aluminium</li> <li>• Iron and steel</li> <li>• OI-Al (cables)</li> <li>• Metallic mixtures (hard iron)</li> <li>• Plastic and rubber materials</li> <li>• Paper and cardboard</li> <li>• Textiles</li> <li>• Fluorescent tubes and other mercury-containing waste</li> <li>• Dismantled electric and electronic equipment</li> <li>• Metals</li> <li>• Wood</li> <li>• Leather</li> </ul>	<ul style="list-style-type: none"> <li>• Tiles and ceramic materials (porcelain insulators)</li> <li>• Wood</li> </ul>	<ul style="list-style-type: none"> <li>• Mineral non-chlorinated insulating and heat transmitting engine oils</li> <li>• Sharp objects</li> <li>• Infectious-prickly medical waste</li> <li>• Chemicals of or containing dangerous substances</li> <li>• Medicines</li> <li>• Plastic and rubber materials</li> <li>• Other engine, transmission &amp; lubrication oils</li> <li>• Sludge from oil-water separators</li> <li>• Oily water from oil-water separators</li> <li>• Protection clothes</li> <li>• Plastic materials (personnel equipment)</li> </ul>	<ul style="list-style-type: none"> <li>• Tiles and ceramic materials (porcelain insulators)</li> <li>• Earth and pebbles</li> <li>• Waste mixes from construction and demolition</li> <li>• Plastic and rubber materials</li> <li>• Fluorescent tubes and other mercury-containing waste</li> <li>• Mixed municipal waste</li> <li>• Sludge of septic tanks</li> <li>• Worn-out tyres</li> <li>• Oil filters</li> <li>• Brake plates</li> <li>• Concrete</li> </ul>

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

In accordance with monitoring the qualitative physical-chemical indicators of conventionally clean rainwater, of contaminated rainwater from the tanks of power transformers & shunt reactors, before and after oil separators; of underground water of manholes; of domestic used water and used water from car garage sampled from Transelectrica's electric substations in 2020 and in accordance with results, the physical-chemical indicators found in used water samples fell within the maximum limits admitted for pollutants discharged in the environment. However there were a few slight exceeding of specified values for indicator  $Zn^{2+}$  in samples taken of substation Domnesti (oil separator output of TRAFO 5 and final outlet), substation Brazi Vest (oil separator output, AT3), substation Gura Ialomitei (oil separator outlet, TRAFO 3+4) and substation Teleajen (oil separator output, AT2), and for indicator  $Cu^{2+}$  in the sample from substation Teleajen (oil separator output, AT2).

Taking into account that throughout last year no exceeding was recorded in such substations, but also that such exceeding is minor we can deem such cases as sporadic, which for the time being have no significant negative impact on water quality.

However mention should be made most zinc and copper of used water does not

come from specific points, this being the reason why sources of potentially noxious items are rarely quantified in water. Potential sources to increase the concentrations of such water indicators can be:

- Pipe leaks;
- Used oil from substation equipment;
- Improper storage of electric and electronic waste;
- Fungicide, insecticide, pesticide and fertiliser substances spread on soil;
- Paints and pigments used for equipment maintenance;
- Precipitation that can wash atmospheric deposits of industrial emissions, and also from traffic and transport (exhaust gas, wear of zinc-containing tyres, engine oil and fuels releasing zinc on motorways);

Consequently seeing such results careful supervision of fore-mentioned indicators is recommended in the water samples from problematic sites in order to provide uninterrupted assessment of possible environmental impacts.

In 2020 the National Environmental Guard made no inspection; controls were performed by SGA Salaj, SGA Ialomita, SGA Olt – Slatina, following which the Company had received no recommendation of major measures.

# FUTURE MEASURES TO DIMINISH LOCALLY IDENTIFIED PROBLEMS

(103-1, 103-2, 103-3, 203-2)



## Environmental protection

Transelectrica in its transmission system operator capacity considers it has major responsibility towards future generations and permanently strives to find sustainable economic solutions to develop and upgrade its installations according to the European Union's environmental protection requirements, all the more so because it has obligations under the membership condition

in Greenddeal context and other agreements; all these are important and have direct impact over national measures.

Our environmental policy takes over the commitment to perform all specific activities in responsible manner and pay proper attention to environmental impacts and sustainable performance, by means of clear objectives provided in the table below:

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 technologies, by 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



## 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.

Taking into account the unusual circumstances facing the whole world in 2020, the measures applied Company-wide in the context of SARS CoV - 2 pandemic aimed at diminishing its negative effects and assumed:

- Elaborating notes on the preventive protective conduct against Covid 19;
- Permanent information of personnel about the pandemic and authorities' recommendations;
- Implementing the tele-work system, personnel information and training about the proper operation of such a system;
- Elaborating a Business Continuity Plan to provide safe operation of the National Power System in the pandemic context;

- Implementing measures to prevent undesired pandemic situations: taking employees' temperature, changing the working time, alternative use of tele-work;
- Multiple procurements of services, protective & preventive equipment provided to employees or used in offices;
- Multiple steps were taken from the beginning of 2020 to hire a labour specialised doctor, which was achieved in July 2020;
- To date COVID 19 infections have been managed according to the internal Regulation on the Measures to be applied in Transelectrica during the alert state in order to prevent and fight COVID 19 effects, and all such situations were kept under control.



## Education

Having turned ourselves towards corporative 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.



## Corporate volunteering

In Romania an increasing number of employees consider the Company's social and ethical values as very important. This is the reason why employees are important public for the corporative 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.

Unfortunately given the pandemic, 2020 was not good for corporate volunteering but we will provide such activity in the future to make up the gaps of last year.



# CORPORATIVE SOCIAL RESPONSIBILITY

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

Transelectrica furthers 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 of corporate social responsibility are:

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



**100%**

## Examining 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 the 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.

The context generated by Covid-19 pandemic turned Transelectrica's efforts especially to the medical area providing support the social categories having got direct negative impact.

In 2020 we shouldered organisations such as National Red Cross

Society, Blind People's Association of Romania, Association Developing Cultural Objectives, Polytechnic Foundation Timisoara or the Natural Vacaresti Park Association.

In terms of performance the Company managed transposing over 91% of the budget allotted in 2020 into corporative social responsibility, going above the 90% target established at the beginning of last year. In 2021 we would like to exceed again 90% and allocate all amounts to important causes, with significant impact over the society at large.



# PROJECTS WITH TRANSELECTRICA'S INVOLVEMENT IN 2020

## ❑ 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.

Furthering the 2019 partnership, in 2020 Company supported the Polytechnic Foundation of Timisoara to award prizes to its best students.

### Me and the World Association

Education, especially in disfavoured areas with great need of permanent investment, is one of the most important domains where social-corporative efforts should be focused. Thus in cooperation with Me & the World Association Transelectrica has contributed to covering expenses for the “Children for children!” project by purchasing books, school supplies, sweets and also the expenses of involved personnel. This project impacted significantly the participating children, bringing a spark of light in a year dominated by medical issues when almost all corporate social responsibility campaigns turned to this domain or, in other cases, in social areas to help people placed in difficult situations by the pandemic..



## ❑ ENVIRONMENTAL ACTIVITIES

### Natural Vacaresti Park Association

In 2020 we sponsored the purchase, location and decoration of a structure enabling the running of the visiting mini-centre ‘Nature at your doorstep’; locating photo-voltaic panels and organising activities dedicated to biodiversity in the Natural Vacaresti Park. A space was developed on the main path at the Urban Rangers House where visitors can find out the park history, information about species and habitats, and get eco-system services.





## □ HUMANITARIAN ACTIVITIES



### Maya & Friends Foundation

Transelectrica contributed to financing the project “Together for our seniors”, which intended providing a hot meal to old people of Valiug. This supported the organisation to get involved in a disfavoured region in financial terms, and to provide things that are normal in different circumstances.

### National Red Cross Society

Considering the circumstances generated by Covid-19 pandemic Transelectrica involved in supporting the organisations that acted towards quickly solving the occurred problems. Thus two sponsorships were granted to two subsidiaries of the National Red Cross Society to aid disfavoured people in those areas, and to stop difficulties during the pandemic. Taking into account the exceedingly great efforts made by specific associations, but especially by the National Red Cross Society, we deem such circumstances like those of 2020 require general mobilisation of all organisations active in Romania, to support such activities.



### Blind People's Association of Romania

Many times primary senses are ignored by most of us, because they seem natural and simple. However whenever they are absent a person's life is fundamentally changed. This is why Transelectrica sponsored the Blind People's Association of Romania to procure a Braille Fonfold D V5 printing equipment, which will facilitate a little bit the life of blind people supported by this association.





# 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 international cooperation programmes on energy efficiency;



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/EC and 2006/32/EC;
- Directive (EU) 2018/2002 of the European Parliament and Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency;
- Law 121 of 18 July 2014 on energy efficiency (to apply Directive 27/2012 on energy efficiency at end users'), updated;
- National Action Plan of Energy Efficiency (PNAEE IV 2017 – 2020);
- Law 372/2005 on the energy performance of buildings, updated;
- Patterns for the total annual energy consumption return and the energy analysis questionnaire for energy consumers, transmitted by the Ministry of Energy;

In 2020 Transelectrica wrote and approved its Energy Efficiency Strategy. In accordance with such strategy energy efficiency is approached in entire CNTEE Transelectrica SA by five main directions, namely:

- Reducing the amounts of electricity to compensate losses within RET (CPT);

- Reducing the electricity consumption supplying auxiliary services of electric substations;
- Reducing the electricity consumption of administrative offices;
- Reducing the heat consumption for buildings (both by reconsidering the installations and by increasing the energy efficiency of buildings);
- 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:

- Every 4 years' performing the energy audit on an outline of energy consumption established by the economic operator, which should represent at least 50% of the economic operator's total energy consumption;
- Allocating the Energy Manager responsibility to a licensed expert;
- Filling in the last year's 'Consumption return' and 'Energy analysis questionnaire';
- Elaborating each year the 'Assessment report for the growth potential of energy efficiency in electricity networks' and the 'Plan of annual measures and investments to improve energy efficiency in the Electricity Transmission Grid';

## Current activities in the energy efficiency domain

In general energy efficiency improving measures of CNTEE Transelectrica SA are found in the investment programmes based on the 10 years' RET Development Plan.

Current energy efficiency activities pertain to:

- Energy audits made 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;
3. Extending the 'infotehnic' 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. Completing the study on the use of Li-Ion batteries for auxiliary services in Transelectrica's substations and turning the associated consumption flexible;
  6. Developing the feasibility study to install two modern means of reactive power compensation (FACTS) in the 400/220/110/20 kV Sibiu Sud & 400/220/110/20 kV Bradu substations;
  7. Initiating the technical documentation to promote principles of passive buildings for the inventories of Transelectrica;

Among the 2020 activities specific for energy efficiency are the following:

1. Performing the second energy audit stage in the buildings managed by Transelectrica;
2. Practical application of the Energy Efficiency Strategy;



## Using electricity from renewable sources

Transelectrica procures electricity to cover one's own technologic consumption (CPT) and the electricity consumption of the 81 high voltage substations managed by the Company:

- In the long-term, on the centralised markets managed by OPCOM;
- In the short run on the Day-ahead Market to cover differences between CPT forecasted at the beginning of the year and the one daily forecasted, and on the Intraday Market (PI) in case of forecast changes during the day, as close as possible to the delivery time;

In accordance with the Electricity labelling regulation approved by ANRE Order 61/12.10.2016, published in the Official Gazette 836/21.10.2016 (with later amendments and additions, made by Order 214/03.12.2019), the submission term of electricity labelling returns is 1 June in the year following the reporting one,

consequently in 2020 electricity labels are not yet available.

Since electricity labels for 2020 are available from 1 June this year, according to the ANRE-approved electricity labelling regulation we provide the 2019 available data for contracts concluded on the Centralised Market of bilateral electricity contracts representing 54.41% of total CPT, according to the electricity label returns notified by contractual partners, the Company procured 160,136.78 MWh from renewable sources.

In case of electricity procured on the DAM, PI and PE the producer/supplier / trader associates the national structure of primary energy sources and the annual national average values of environmental indicators, calculated and published by ANRE by 1 April of each year for previous year. In 2020 the structure by types of primary renewable energy sources of electricity output was the following in Romania:

Structure by types of primary renewable energy sources of power generation in Romania	2019 power generation in Romania
hydroelectric	26,75
wind	12.09
solar	2.62
biomass	0.68
others	0.01
Total	42.16

Thus the electricity procured on the DAM, PI and PE to cover CPT in 2020 from renewable sources amounted to 188,188.46.

Year	Quantity procured on the DAM, PI & PE [MWh]	Renewable sources [%]	Quantity of renewable sources [MWh]
2020	446,367.32	42.16	188,188.46

In order to cover the auxiliary service consumption of the 81 electric substations managed by the Company, in 2020 electricity was procured through the Romanian Commodities Exchange under contract C93/2019 concluded with Electrica furnizare by SFEE Muntenia Nord.

In accordance with the contractual partner's electricity labels, the electricity quantity procured to cover auxiliary services in 2020 from renewable sources was of 14,441.47 MWh.

Year	Partner	Quantity [MWh]	Renewable sources [%]	Quantity of renewable sources [MWh]
2020	Electrica Furnizare, by SFEE Muntenia Nord	43,186.21	33.44%	14,441.47

## 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. IStandardisation and data exchange;
- III. Integration of storage systems;
- IV. Greater efficiency in 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 that 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 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);

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;
7. Determining and using the transmission capacity established in dynamic mode as complementary method for more efficient operation of existent infrastructures;

In 2020 new projects of interest were found with respect to using

new technologies, of which mention can be made of the following:

- a) Using RTDS - Real Time Digital Simulation systems for Transelectrica-wide system investigations;
- b) Using Li-Ion batteries for auxiliary services in Transelectrica substations and turning flexible the associated consumption;
- c) Replacing the car fleet of the executive branch with electric motor cars;
- d) Promoting passive house principles for the buildings managed by Transelectrica;

## European projects which Transelectrica is a partner of European research project CROSSBOW

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 utilisation 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.



## European research project FUTURE FLOW

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 has 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.

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;
- 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;



# Future Flow

## European research project INTERFACE

“INTERFACE – 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, the project began in January 2019, it will be developed for 48 months and 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 provide 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 Europe;
- 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 (OTS) <sup>(302-4)</sup>

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



### Digitalisation

It will lead to higher volumes, quality and topicalness of information about the actual operation of the RET. This will contribute to informed decision-making, better RET planning and maintenance processes, so as to simultaneously minimise risks together with operational costs.

### Solar energy

The developments of photovoltaic generating technologies will reduce the cost of solar energy up to 40% in the next ten years, while the price of modules will drop more than 20% for each capacity doubling. By 2025 the photovoltaic technology will provide the cheapest electricity generation in many parts of the world.



### Energy storage

For its better management in the context of technological development

### Bidirectional communications

For a better involvement of end clients in the improved quality of services they benefit of



### Smart electricity networks

Smart grids will begin to provide self-management and will include characteristics enabling self-configuration in order to manage security, safety and reduce losses; self-regulation to approach voltage variations and self-optimisation to damp disturbances. New modelling techniques will be developed for the design, testing and verification of electricity network management.

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

## *Using HPC data extraction (High Performance Computing)*

- Developing the information technology sector society-wide and economy-wide 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

## *Using 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 and 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 utilisation of renewable sources*

- In order to increase network flexibility

## *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*

- Digitalising the power system and the cybersecurity issues associated to such developments; more active client participation on the electricity market represent challenges which the power system respond to by investments into research and innovation activities

## *Maintaining system security and stability*

- TSOs 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, and 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.

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";
- 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";

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: - Digital substation

- Condition monitoring
- Asset management

- Asset management
- Passive & Smart building
- E-Learning
- Health index
- Risk index
- Health centre
- Test laboratory of digital technologies & developing personnel competence
- Gerographic Information System
- Outage Management System

In October 2020 a Contract was signed for digital services (FS & ToR), for 18 months.

In November - December 2020 working meetings were held following which 10 Minutes were signed, clearing up essential technical issues of the design stage.

Also the following projects were initiated in the digitalisation domain:

1. Pilot project "Optimising the operation of the 400 kV OHL Isaccea – Tulcea Vest and 400 kV OHL Gura Ialomitei – Lacu Sarat by installing monitoring systems" intends supply and installation of on-line monitoring equipment to the two OHLs, 400 kV Isaccea – Tulcea Vest and 400 kV Gura Ialomitei – Lacu Sarat. In 2020 two engineering meetings provided in the contract were held and detailed the list of equipment; technical details were established for equipment, IT & TC solutions, as well as the technical operation of installations, etc.
2. Project "Optimising the operation of the 400 kV OHLs existent in SEN, used for interconnection and for power discharge from nuclear power plant Cernavoda and the renewable power parks of Dobrogea,

by installing on-line monitoring systems (smart grid)" aims at implementing on-line monitoring systems onto 23 OHLs to increase the operational security of SEN and the transmission capacity by putting the Dynamic Line Rating (DLR) concept in operation In 2020 we elaborated:

- Conceptual note;
  - Design topic;
  - Feasibility study;
  - Terms of reference to procure design & work services;
3. In 2020 the Feasibility study and Terms of reference were drawn up to "Procure and install 21 integrated monitoring systems for the transformer units of Transelectrica substations".

Technical-economic indicators were approved all through 2020; the estimated project term is of 42 months.

There will be 3 stages of achievement:

- ☐ Stage 1, installing 12 monitoring systems, estimated term 17 months;
- ☐ Stage 2, installing 3 monitoring systems, estimated term 10 months;
- ☐ Stage 3, installing 6 monitoring systems, estimated term 15 months;

The public procurement procedure was initiated in 2020. At present the procurement documentation is in the economic offers opening stage and the winning bidder will be decided before long..

# 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 services 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 for 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 associated to the operation of power systems;
- Improved services and results;
- Higher operational efficiency and effectiveness;
- Extending the lifecycle 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 to implement 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 fourth 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 2020 – 31 December 2020.

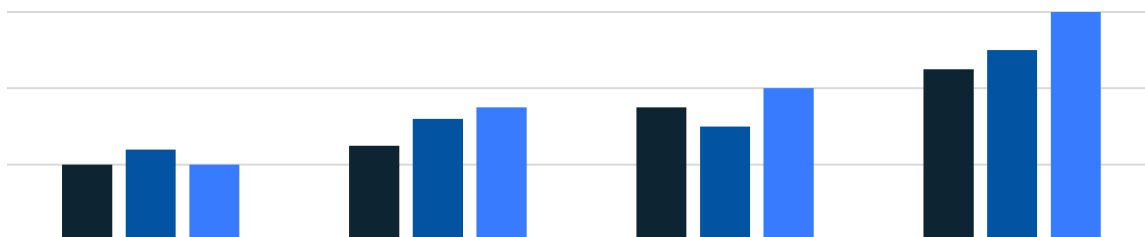
The information included in the Sustainability Report of Transelectrica are not dealing in exhaustive manner with the non-financial Company aspects, however it relies on what stakeholders have notified as being domains of interest. This report brings about, besides updated information about indications 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.

This 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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# GLOSSARY

- AGA – Shareholders' General Assembly
- ANRE – National Regulatory Authority in the Energy domain
- BVB – Bucharest Stock Exchange
- CE – European Commission
- CPT – One's own technological consumption
- CRE – Romanian Energy Centre
- dB – decibels
- EGRC – Risk management team of the Company
- ENTSO-E – European Network of Transmission System Operators for Electricity
- GRI – Global Reporting Initiative
- GWh – Gigawatt hour
- KPI – Key performance indicators
- kV – Kilo-volt
- LEA / OHL – Overhead electric lines
- MW – Megawatt
- MWh – Megawatt hour
- TSO – Transmission and System Operator
- DAM – Day-ahead Market
- PI – Intraday Market
- PE – Balancing Market
- RET – Electricity Transmission Network
- SEN – National Power System
- SNA – National Anticorruption Strategy
- TWh – Terrawatt hour
- UNO-DEN – Operational Unit of the National Power Dispatcher

**TRANSELECTRICA SA**



