



Annual Report
2019



Azienda Elettrica Ticinese

Annual Report **2019**

**Report of the Board of Directors
of the Azienda Elettrica Ticinese
to the Grand Council and the Council of State
of the Republic and Canton of Ticino**

Ladies and Gentlemen,
Chairmen,
State Councillors,
Parliamentary Representatives,

in accordance with the provisions contained in article 6 of the Act of the Azienda elettrica ticinese (LAET), we hereby submit:

- the report of the Board of Directors for the year 2019;
- the auditors' report;
- the financial statements for the year 2019;
- the proposal for allocation of result.

The english version of the AET 2019 Annual Report is merely a translation:
the official version is the italian text.



AET Grid

The pictures in the 2019 annual report illustrate some of the activities carried out by the employees of AET's grid division, in particular on the building site for the realization and the connection to the grid of the new Ritom power plant in Quinto.

AET Grid manages and maintains the regional medium and high voltage distribution network (150 kV, 50 kV and 16 kV) of AET, consisting of 22 substations (380 kV, 220 kV, 150 kV and 50 kV) and 116 transformation stations. It also offers qualified services to third parties in the planning, construction and maintenance of transformation plants, transmission grid and telecommunications networks. AET is the reference partner of the national transmission system operator Swissgrid for the south of the Alps area and is responsible for grid management and renewal projects on behalf of other entities, such as: AlpTransit, the Federal Road Office, the Swiss Federal Railways and the Department of Territory.

On the cover: View of Giornico from north.
Photo: Stefano Mussio / Lucasdesign

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Ritom SA, 75% owned by the Swiss Federal Railways and 25% by the Canton of Ticino, is building the new Ritom hydroelectric power plant. The plant will be equipped with two 60 MW turbines: the first coupled to a 16.7 Hz generator to supply the railway network, the second to a 50 Hz one to supply the cantonal network of AET. A 50-16.7 Hz frequency converter will allow the exchange of energy between the SBB network and the cantonal network. A 60 MW pump that will allow AET to optimise the Ritom and Airolo reservoirs accumulation capacity completes the system. AET participates in the construction, providing specialist services in the field of grid connection and the electromechanical part of the generators.

2019 in summary

Key figures

| | 2019 | 2018 | 2017 | 2016 ² | 2015 ¹ |
|---|-------|-------|-------|-------------------|-------------------|
| In CHF million | | | | | |
| Operating income | 1,018 | 871 | 872 | 824 | 1,033 |
| Operating result | 16 | -15 | -19 | -27 | 38 |
| Net result | 9 | -2 | -13 | -31 | -44 |
| Equity | 329 | 323 | 328 | 342 | 420 |
| Equity in % of balance sheet total | 42.7% | 41.8% | 40.3% | 41.9% | 38.9% |
| Non-current assets | 501 | 506 | 527 | 510 | 729 |
| Balance sheet total | 771 | 775 | 813 | 816 | 1,079 |
| Distribution of dividends to the State | - | - | - | - | - |
| Interest on capital, due to the State | 3 | 3 | 3 | 3 | 3 |
| Employees of the Group (full time equivalent) | 272.6 | 265.3 | 252.9 | 263.6 | 451.9 |
| | | | | | |
| | 2019 | 2018 | 2017 | 2016 | 2015 |
| In GWh | | | | | |
| Production AET Group | 1,090 | 955 | 814 | 872 | 1,020 |
| Production participations | 1,637 | 1,550 | 1,451 | 1,310 | 2,004 |

¹ 2015 figures restated

² 2016 figures restated

In 2016 the participation Società Elettrica Sopracenerina SA (SES) has been deconsolidated following the decrease of AET's shareholding from 53% to 30%.



The Executive Management of AET

From left: Giorgio Tognola, Edy Losa, Claudio Nauer, Roberto Pronini, Fiorenzo Scerpella, Flavio Kurzo.

Photo: Massimo Pacciorini-Job

Company officers

Board of Directors

Leonardi Giovanni, *Chairman*
Lombardi Sandro, *Vice Chairman*
Beffa Floriano
Cauzza Dino
Cereghetti Claudio
Ogna Ronald
Passoni Alberto

Group auditor

KPMG SA, Lugano

Executive Management

Pronini Roberto, *CEO*
Nauer Claudio, *Co-CEO*
Kurzo Flavio, *CFO*
Losa Edy, *Head of energy production*
Scerpella Fiorenzo, *Head of grid*
Tognola Giorgio, *Head of energy trade*



In order to ensure the connection of the new Ritom hydroelectric power plant to the cantonal 50 kV grid, AET is proceeding with the complete re-making of the "Stalvedro" substation. The new substation is located above AET's existing Stalvedro power plant, which will be incorporated into the new Ritom power station building.

Report of
the Board of Directors



At the heart of the new substation is an encapsulated and SF6 gas-insulated 50kV distribution system (GIS), which was delivered to the site at the end of winter.

Introduction by the Chairman

Tempus fugit

2019 marked a return to black figures after four consecutive years of losses. It concluded a particularly long period that is a unicum in the history of AET. The development of wholesale electricity prices and the strategic countermeasures adopted have enabled the Company to overcome the crisis years without compromising its financial strength nor the assets represented by the cantonal hydroelectric resources.

But this is no time to let our guard down. Price stability is undermined by a number of uncertainties, which are already responsible for extreme volatility today. The shutdown of the Mühleberg nuclear power plant in December 2019 marked the start of a new and decisive phase in the energy transition. In Germany, all nuclear power facilities will be taken out of service within less than two years, and the recent plans for the phasing-out of coal production in Germany set out a relatively tight schedule. We are at a turning point and there is no time to look back: mere political intentions of few years ago are now becoming reality, and uncertainties are becoming certainties. The health emergency broken out in the first months of 2020, whose impact on the electricity market still is unquantifiable, came on top of those constantly evolving conditions.

The hydroelectric power generation will gain in importance being able to compensate for fluctuations in the production of the so called alternative energies, in particular of the photovoltaic generation, which also has a strategic role to play. However, investments in these areas take a long time: just think of the 17 years it took to obtain the licence to build five wind turbines on the St. Gotthard Pass, or the 12 years that separate the signature of the agreement for the construction of the new Ritom power plant from its planned date of commissioning. From this point of view, 2050 is much closer than we perceive. To date, we are aware of the plans for phasing out nuclear and coal power generation in Switzerland and in Europe, but the strategies for replacing the resulting losses in production are not yet entirely clear. In Switzerland, the Federal Department of the Environment, Transport, Energy and Communications (DETEC) has recently presented its proposals for amendments to the Federal Electricity Supply Act and the Energy Act. Their effective implementation now depends on the outcome of a complex parliamentary process. However, the sector needs to soon know in detail which investments to support and which resources will be available to do so.

The main risk we are facing resulting from the current situation concerns security of supply. The phasing-out of nuclear generation in Switzerland, combined with the desired increase in non-programmable renewable production, will exacerbate the problem of energy shortages in the winter months and surpluses in the summer months. Increasing electricity imports from neighbouring countries in winter does not appear to be a viable solution: Germany will suffer similar shortfalls while France, which is preparing to reduce its nuclear power facilities, will soon reach the limits of its production capacity. The truth is that we live in an interconnected system at European level, where no country can imagine applying its own energy policy without considering its neighbours. We need a coordinated plan with

common objectives, which will make it possible to plan the production and flows of electricity at supranational level; a requirement that all too many people are still struggling to recognise. The absence of an agreement on energy trade with the EU, for example, prevents our country from participating in joint planning and exposes us to the transit of uncontrollable energy flows, which are already putting the stability of the network infrastructure under strain. According to a recent study by the EPFL in Lausanne, this situation could cost us up to a billion Swiss francs a year by 2030.

From a technical point of view, the main challenge facing the national production system is to shift the excess summer production to the winter months. One efficient solution would be to increase the accumulation capacity of hydropower reservoirs – either by raising existing dams or building new plants in locations where glaciers are retreating – in combination with pumping systems, which increase the flexibility of existing generation chains. Such endeavours usually involve planning and implementation timescales that are measured in tens of years: therefore, if we want to be ready by 2050, it is high time to accelerate. Clear planning and well-defined timeframes are essential to ensure the stability of the system and of electricity prices.

The strategy adopted in recent years has allowed AET to withstand the difficult market phase whilst preserving the financial strength of the Company. The challenges posed by the energy transition and by the market, which have led to organisational and technological changes, have nevertheless not been overlooked. Investments in cantonal renewable production, the replacement of the transport network, digitisation and the development of the sales activities in Ticino and in the rest of Switzerland are the main axes of the current strategy. We are ready to meet the challenges of the energy future and have the necessary skills and resources to do so. We are now awaiting key signals from the regulator.



A handwritten signature in blue ink, appearing to read 'Leonardi'.

Giovanni Leonardi
Chairman



A detail of the transportation phase.



A field of the future GIS with a total weight of about 3 tons is lifted 10 m above the ground to be brought into the new "Stalvedro" substation.





The new GIS was taken over by AET personnel, who took care of its installation together with the specialized technicians of the supplier.

Management report

Let's build the future

AET closed the 2019 financial year with an operating result of CHF 16 million (2018: CHF –15 million) and a net profit of more than CHF 9 million (2018: CHF –2 million). The net result was adversely affected by an increase of the impairment on the energy procurement contract with EDF.

The result returned to profit after four years of losses on account of long-term price growth between 2017 and 2018 and good hydroelectric production throughout the year.

Production

Electricity

The 2019 financial year benefited from a sustained period of snow melting and heavy rainfalls concentrated in the last few months of the year. Hydroelectric production at AET's plants stood at 1,086 GWh, up 16% compared to 2018 and above the multi-year average.

Hydroelectric production from participations exceeded the ten-year average by 12.5% to reach 675 GWh.

AET's share of production at the German plant in Lünen was 566 GWh, around 15% lower than in 2018. As in previous financial years, market prices were not sufficient to cover the production costs of the power plant. This difference resulted in a higher cost to be borne by AET, of approximately CHF 20 million.

AET's pro-quota production from nuclear participations in Switzerland and France was 350 GWh, in line with the previous year.

Thermal energy

TERIS Teleriscaldamento del Bellinzonese SA, a company that is 60% owned by AET, has completed the expansion of the thermal station at the Giubiasco waste-to-energy plant with the installation of a new back-up thermal plant and two water storage tanks. Two additional back-up plants have been completed at the secondary schools in Giubiasco and ICEC (Istituto Cantonale di Economia e Commercio) in Bellinzona. Several new users were also connected to the district heating network during 2019.

Calore SA, a company owned by AET and Società Elettrica Sopracenerina SA (SES) which manages the Morettina district heating plant in Locarno, has started the study phase for the Verbano 2030 project, which includes the extension of the district heating network and the construction of a new thermal plant in the Lido area. During the year the company sold its participation in Biomassa Blenio SA to the Municipalities of Acquarossa and Blenio and to the Comunità dei Patriziati della Valle di Blenio.

Capriasca Calore SA, a company owned by AET, the Azienda Elettrica di Massagno (AEM) and the Municipality of Capriasca, has started the construction of the new thermal plant with an attached district heating network in Tesserete. Pre-contracts for the connection of municipal buildings were signed during the year.

Metanord SA, a company in which AET holds a 33% stake, closed 2019 with an increase in the volume of gas supplied compared to 2018, but below expectations. This development can be explained by the particularly mild climate in the first few months of the year.

Energy trade

The market

After a sustained period of growth, prices on the power exchanges experienced a turnaround; the drop compared to 2018 was 15% on the German and Italian exchanges, and over 20% on the Swiss and French ones. These declines were due to climatic reasons: the relatively mild summer and a winter without cold spells reduced seasonal consumption.

Future prices experienced a year of uncertainty and volatility, without showing any particular trend. Brexit favoured speculation on the CO₂ certificate market, which alternated strong ups and downs, while the downward trend for coal and gas was quite evident throughout the year, with an acceleration in the final few months.

Sales

The evolution of the market requires AET to constantly develop the range of products and services for customers. In 2019, particular attention was paid to strengthening relations with distribution companies throughout Switzerland and to the digitisation of the services intended for them.

All contracts with distributors in Ticino and Moesano have been extended and the volumes of energy handled have increased, especially in German-speaking Switzerland, where a +50% rise was recorded.

The range of services offered to distribution companies in the areas of "Guarantees of Origin" (GO), labelling and plant certification is also growing, while collaboration with Enerti for the sale of the range of eco-products in Ticino was renewed for a further year.

Finally, with regard to cooperation with cantonal distributors, it is important to underline the good relations and excellent financial results of the participation Società Elettrica Sopracenerina SA (SES).

During the year a contract was finally signed with Repower for the supply of 150 GWh/a of AET Blu energy for the period 01.01.2020 – 31.12.2034.

Grid

AET's supra-regional distribution network undergoes constant modernisation and maintenance.

In 2019 the renewal of the Monte Carasso substation was completed and the permanent power supplies for the railway operations buildings of the Monte Ceneri base tunnel in Vezia and Camorino were put into service.

During the spring, the network for the fast charge of electric vehicles on Ticino's motorway service areas was completed, with a total of 6 columns.

In the Upper Leventina, modification and strengthening works began in order to prepare the grid for the connection of the new Ritom power plant during construction and following commissioning, as well as that of the St. Gotthard wind farm. The pre-design phase for the construction site connection for the second St. Gotthard motorway tunnel is now also under way.

In the field of services for third parties, AET has once again secured the tender for the inspection of Swissgrid's high-voltage lines in Ticino for the next 3 years, acquiring various extraordinary maintenance and infrastructure modernisation contracts. This further strengthens the cooperation in the south of the Alps between AET and the national transmission system operator.

Finally, the networks of the power plant operators Ofible (50 kV) in Olivone and of Verzasca SA (150 kV) were purchased and integrated into AET's supra-regional distribution network. This will improve local supply security and optimise network upgrade costs in the medium and long term.

Strategic projects

The construction site of the Parco eolico del San Gottardo SA (a company that is 70% owned by AET) for the erection of the first wind farm in Ticino opened in June 2019 after a few weeks' delay caused by heavy snowfall in the spring. The schedule for the year was met with the completion of the foundations for the 5 blades. Subject to possible slowdowns due to the current pandemic, the final assembly is expected to take place in summer 2020 and the wind farm should start operating in October 2020.

AET will also benefit from the realisation by the Canton and the Swiss Federal Railways – SBB of the Ritom project, developed and carried out by Ritom SA (a company owned 75% by SBB and 25% by the Canton Ticino). This company has obtained the licence for the exploitation of the Ritom hydropower and the works on the new power plant in Piotta are in progress. AET is participating to the construction of the plant, providing specialist services in the field of grid connection and for the electromechanical part of the generators. After commissioning, foreseen for 2024, AET will manage the cantonal share of the production and execute, on behalf of Ritom SA, the maintenance activity of the power plant. AET will take on the SBB staff working at the current plant on the basis of an agreement concluded during the year.

Finally, AET (in cooperation with the cantonal authorities) will have to initiate strategic plans in view of the future return into public ownership, which are the main long-term strategic project on a cantonal scale.

Conclusion

2019 marked AET's return to profit. The Company was finally able to leave the long fallout from the worst market period (years 2012–2016). The outlook for the future still looks bleak. Prices have been extremely volatile for a couple of years and economic indicators do not suggest a stabilising trend, at least in the medium term. The difficulties encountered at the beginning of 2020, linked to a new fall in prices, leave no room for optimism.

Other factors weighing on the Swiss electricity market include uncertainties surrounding the measures that will be taken as part of the second package of the Swiss Energy Strategy 2050, the absence of a framework agreement with the European Union and the timing of the complete opening of the internal market. Added to this uncertain picture, the real impact on the national economic system of the health emergency that broke out in March 2020 remains unpredictable at the time of writing.

We are nevertheless able to glimpse a few basic trends in this scenario that will condition the evolution of the market and of the entire electricity sector going forward: decarbonisation, i.e. the progressive abandonment of fossil energy sources in favour of renewable ones; electrification, i.e. the growing use of electricity in the fields of transport and heating; the convergence of networks, allowing energy to be exchanged between different carriers; the decentralisation of production due to the increase in small scale renewable energy generation for domestic use; and digitisation, which is essential for the management of the growing complexity resulting from the transformations mentioned above.

During these difficult years, AET has revised its strategy with the dual aim of preserving its financial strength and preparing for the upcoming challenges. AET's investments are focused on the development of production from renewable sources in Ticino, the modernisation of the supra-regional transmission grid and the offering of up-to-date products and services for customers in Ticino and the rest of Switzerland. These are effective steps along the way that will allow the Company to adjust its skills for effective and competitive operation, even in the market of the future.

Proposal for allocation of result

The Board of Directors, in accordance with article 18 LAET (respectively article 671, Paragraph 2 of the Swiss Code of Obligations), proposes to allocate the result as follows:

| In CHF 1,000 | |
|--|---------------|
| Net result 2019 | 1,256 |
| – to the State: 8% interest on the endowment capital | –3,200 |
| – dividend to the State | – |
| – allocation to the general reserves | – |
| Allocation to the results carried forward | –1,944 |

On the basis of the documentation submitted we ask the State Council and the Grand Council, for ratification of:

- the report of the Board of Directors for the year 2019;
- the financial statements for the year 2019;
- the proposal for allocation of result;

granting the discharge to the directors and the management for their activity.



A detail of the delicate operations of installation the new GIS.

Consolidated financial statements

Consolidated balance sheet

Assets

| | | 31.12.2019 | 31.12.2018 |
|--|-------|----------------|----------------|
| In CHF 1,000 | Notes | | |
| Plants and equipment | | 255,460 | 249,266 |
| Land and buildings | | 52,496 | 52,170 |
| Tangible fixed assets under construction | | 25,128 | 29,191 |
| Tangible fixed assets on lease | | – | 144 |
| Other tangible fixed assets | | 2,617 | 1,179 |
| Tangible fixed assets | 2 | 335,701 | 331,950 |
| Participations in associates | 3 | 80,619 | 77,481 |
| Long-term securities | 4 | 45,929 | 46,983 |
| Advances and loans to participations | 5 | 19,804 | 20,135 |
| Other financial assets | | 470 | 630 |
| Financial assets | | 146,822 | 145,229 |
| Usage rights | | 7,980 | 8,266 |
| Energy procurement rights | | 6,254 | 16,598 |
| Intangible assets under development | | 3,784 | 3,407 |
| Other intangible assets | | 771 | 1,009 |
| Intangible assets | 6 | 18,789 | 29,280 |
| Non-current assets | | 501,312 | 506,459 |
| Other short-term assets | 7 | 55,372 | 81,241 |
| Prepayments and accrued income | 8 | 109,668 | 98,342 |
| Receivables from goods and services | 9 | 17,624 | 15,066 |
| Cash and cash equivalents | 10 | 87,459 | 73,601 |
| Current assets | | 270,123 | 268,250 |
| Assets | | 771,435 | 774,709 |

Liabilities and equity

| | | 31.12.2019 | 31.12.2018 |
|---|-------|----------------|----------------|
| In CHF 1,000 | Notes | | |
| Endowment capital | | 40,000 | 40,000 |
| Conversion differences | | -8,662 | -6,004 |
| Retained earnings | | 279,250 | 284,041 |
| Net result | | 9,412 | -1,877 |
| Equity attributable to AET | | 320,000 | 316,160 |
| Minority interests | | 9,373 | 7,316 |
| Group equity | | 329,373 | 323,476 |
| Long-term provisions | 11 | 11,773 | 12,843 |
| Other long-term liabilities | | 5,047 | 5,067 |
| Long-term financial liabilities | 12 | 279,625 | 283,038 |
| Long-term liabilities | | 296,445 | 300,948 |
| Short-term provisions | 11 | 5,832 | 4,508 |
| Other short-term liabilities | 13 | 25,930 | 43,868 |
| Short-term financial liabilities | 14 | 7,274 | 6,879 |
| Accrued liabilities and deferred income | 15 | 91,418 | 84,239 |
| Payables from goods and services | 16 | 15,163 | 10,791 |
| Current liabilities | | 145,617 | 150,285 |
| Liabilities | | 442,062 | 451,233 |
| Liabilities and equity | | 771,435 | 774,709 |

Consolidated income statement

| | | 2019 | 2018 |
|---------------------------------------|-------|-------------------|-----------------|
| In CHF 1,000 | Notes | | |
| Operating income | | | |
| Energy income | 17 | 961,374 | 808,019 |
| Grid income | | 38,866 | 44,284 |
| Other operating income | 18 | 17,300 | 18,628 |
| Operating income | | 1,017,540 | 870,931 |
| Operating expenses | | | |
| Energy purchases | 19 | -896,722 | -778,948 |
| Grid expenses | | -22,185 | -24,036 |
| Personnel expenses | 20 | -31,192 | -29,036 |
| Service and material expenses | | -6,725 | -7,000 |
| Depreciation on tangible fixed assets | 2 | -16,328 | -16,743 |
| Amortisation on intangible assets | 6 | -2,544 | -1,695 |
| Other depreciation and amortisation | | -1,014 | -1,014 |
| Other operating expenses | 21 | -24,664 | -27,356 |
| Operating expenses | | -1,001,374 | -885,828 |
| Operating result | | 16,166 | -14,897 |
| Financial result | 22 | -4,327 | -4,781 |
| Result from associates | 3 | 7,255 | 6,622 |
| Ordinary result | | 19,094 | -13,056 |
| Non-operating result | | - | - |
| Extraordinary result | 23 | -8,153 | 12,278 |
| Result before income taxes | | 10,941 | -778 |
| Income taxes | | -972 | -710 |
| Group net result | | 9,969 | -1,488 |
| Minority interests | | -557 | -389 |
| Net result attributable to AET | | 9,412 | -1,877 |

Consolidated cash flow statement

| | 2019 | 2018 |
|--|----------------|----------------|
| In CHF 1,000 | | |
| Net result | 9,412 | -1,877 |
| Minority interests to income statement | 557 | 389 |
| Depreciation on tangible fixed assets | 16,328 | 16,743 |
| Amortisation on intangible assets | 2,544 | 1,695 |
| Other depreciation and amortisation | 1,014 | 1,014 |
| Change in provisions | 326 | 1,310 |
| Change in impairments | 8,248 | -3,094 |
| Profit / loss from disposal of non-current assets | -688 | -2,642 |
| Result from associates | -3,085 | -2,462 |
| Other non cash expenses and income | -53 | -386 |
| Change in receivables, prepayments and accrued income and other short-term assets | 10,611 | -16,337 |
| Change in payables, accrued liabilities and deferred income and other short-term liabilities | -6,312 | 18,749 |
| Cash flow from operating activities | 38,902 | 13,102 |
| Outflows for investment in tangible fixed assets | -20,749 | -18,442 |
| Inflows from disposal of tangible fixed assets | 141 | 21 |
| Outflows for investment in intangible assets | -628 | -1,040 |
| Inflows from disposal of intangible assets | - | - |
| Outflows for investment in financial assets | -565 | -292 |
| Inflows from disposal of financial assets | 512 | 17,423 |
| Cash flow from investing activities | -21,289 | -2,330 |
| Issuance / repayment of short-term financial liabilities | -4,021 | -44,059 |
| Issuance / repayment of long-term financial liabilities | 2,026 | 2,710 |
| Payments related to minority shareholders | 1,500 | - |
| Interests on capital, due to the State | -3,200 | -3,200 |
| Distribution of dividends to the State | - | - |
| Cash flow from financing activities | -3,695 | -44,549 |
| Cash and cash equivalents at the beginning of the year | 73,601 | 107,523 |
| Cash flow | 13,918 | -33,777 |
| Conversion differences on cash and cash equivalents | -60 | -145 |
| Cash and cash equivalents at the end of the year | 87,459 | 73,601 |

Statement of changes in consolidated equity

| | Endowment capital | Conversion differences | Retained earnings | Net result | Equity attributable to AET | Minority interests | Group Equity |
|--|-------------------|------------------------|-------------------|----------------|----------------------------|--------------------|----------------|
| In CHF 1,000 | | | | | | | |
| Equity at 01.01.2018 | 40,000 | -5,379 | 298,958 | -12,697 | 320,882 | 6,927 | 327,809 |
| Allocation of result | - | - | -12,697 | 12,697 | - | - | - |
| Interests on capital, due to the State | - | - | -3,200 | - | -3,200 | - | -3,200 |
| Distribution of dividends | - | - | - | - | - | - | - |
| Capital increases | - | - | - | - | - | - | - |
| Conversion differences | - | -625 | 980 | - | 355 | - | 355 |
| Change in consolidation scope | - | - | - | - | - | - | - |
| Offset consolidation difference | - | - | - | - | - | - | - |
| Net result 2018 | - | - | - | -1,877 | -1,877 | 389 | -1,488 |
| Equity at 31.12.2018 | 40,000 | -6,004 | 284,041 | -1,877 | 316,160 | 7,316 | 323,476 |
| Allocation of result | - | - | -1,877 | 1,877 | - | - | - |
| Interests on capital, due to the State | - | - | -3,200 | - | -3,200 | - | -3,200 |
| Distribution of dividends | - | - | - | - | - | - | - |
| Capital increases | - | - | - | - | - | 1,500 | 1,500 |
| Conversion differences | - | -2,658 | 1,778 | - | -880 | - | -880 |
| Change in consolidation scope | - | - | 1 | - | 1 | - | 1 |
| Offset consolidation difference | - | - | -1,493 | - | -1,493 | - | -1,493 |
| Net result 2019 | - | - | - | 9,412 | 9,412 | 557 | 9,969 |
| Equity at 31.12.2019 | 40,000 | -8,662 | 279,250 | 9,412 | 320,000 | 9,373 | 329,373 |

Notes to the consolidated financial statements

1. Accounting principles

The 2019 group financial statements of Azienda Elettrica Ticinese (AET) were prepared in accordance to the Swiss GAAP FER as a whole and approved by the Board of Directors on the 21.04.2020.

1.1. Consolidation principles

1.1.1. Companies consolidated according to the full consolidation method

The following controlled companies, of which AET holds the majority of the voting rights, were consolidated according to the full consolidation method:

| Subsidiaries ¹ | Currency | Share capital | Shareholding at 31.12.2019 | Shareholding at 31.12.2018 |
|---|----------|---------------|----------------------------|----------------------------|
| | | in 1,000 | % | % |
| AET Italia Srl | EUR | 871 | 100.00 | 100.00 |
| Calore SA | CHF | 2,000 | 65.00 | 65.00 |
| CEG Srl | EUR | 120 | 100.00 | 100.00 |
| Lucendro SA | CHF | 3,000 | 100.00 | 100.00 |
| Parco eolico del San Gottardo SA | CHF | 6,000 | 70.00 | 70.00 |
| Senco Holding SA | CHF | 150 | 65.00 | 65.00 |
| Senco Sagl | CHF | 220 | 65.00 | 65.00 |
| SPE Società per Partecipazioni Energetiche SA | CHF | 8,000 | 100.00 | 100.00 |
| TERIS Teleriscaldamento del Bellinzonese SA | CHF | 10,000 | 60.00 | 60.00 |

¹ Direct and indirect subsidiaries

All consolidated companies have closed their financial year on the 31.12.2019.

At the time of acquisition, all acquired net assets are valued at fair value. Any difference between the acquisition price and the value of the acquired net assets is recognised as consolidation difference and immediately compensated with group equity. All transactions between group companies and the related income and expenses were eliminated in the consolidation process.

For participations of which the AET Group holds less than 100%, the minority interests in shareholders' equity and in shareholders' result are reported as separate items on the balance sheet and income statement.

1.1.2. Changes in consolidation scope

During 2019 there has been no change in the consolidation scope of the AET Group.

During 2018 the following changes have occurred on the consolidation scope of the AET Group.

- On the 06.12.2018 the Group has sold its participation Biogen Chivasso Srl.
- On the 20.12.2018 the dissolution of the participation Bio Elettricità Occimiano Srl (BEO) has been concluded.

The key balance sheet positions at the time of disposal or acquisition / subscription of those companies present as follows:

| | Biogen Chivasso Srl 06.12.2018 |
|-------------------------------|--------------------------------------|
| | EUR 1,000 |
| Non-current assets | 3,222 |
| Current assets except cash | 5,079 |
| Cash and cash equivalents | 169 |
| Assets | 8,470 |
| Equity | –3,241 |
| Long-term liabilities | 170 |
| Current liabilities | 11,541 |
| Liabilities and equity | 8,470 |

1.1.3. Companies recognised according to the equity method

The shareholdings in companies over which the AET Group exercises significant influence but no control are recognised in the Group consolidated financial statements according to the equity method (recognition of the share of shareholders' equity and net profit according to the Group accounting principles, with neutral treatment of the conversion differences arising from foreign exchange translation adjustment).

As for the fully consolidated companies, any positive or negative difference between acquisition price and the value of the net assets acquired is immediately compensated with group equity without impact on the net result.

| Associates ¹ | Currency | Share capital | Shareholding at 31.12.2019 | Shareholding at 31.12.2018 |
|--|----------|---------------|----------------------------|----------------------------|
| | | in 1,000 | % | % |
| Biomassa Blenio SA | CHF | * | * | 22.41 |
| Capriasca Calore SA | CHF | 1,313 | 33.33 | 33.33 |
| Metanord SA | CHF | 18,000 | 33.33 | 33.33 |
| Nord Energia SpA | EUR | 10,200 | 40.00 | 40.00 |
| Società Elettrica Sopracenerina SA (SES) | CHF | 16,500 | 30.00 | 30.00 |

¹ Direct and indirect associates

* Disposed on the 22.11.2019

1.1.4. Other participations

The shareholdings in companies over which AET does not exercise significant influence are valued at their cost value adjusted for any impairment, they are booked within long-term securities.

1.1.5. Conversion of financial statements held in foreign currency

The consolidated financial statements are reported in thousands of Swiss francs (CHF 1,000). The assets and liabilities of foreign subsidiaries are converted at the balance sheet date exchange rates. The income statement figures are converted at the yearly average exchange rates.

Conversion differences are recorded within Group equity, without impact on the net result.

| Exchange rates applied (EUR / CHF) | 2019 | 2018 |
|---|--------|--------|
| Exchange rate on the balance sheet date 31.12 | 1.087 | 1.1269 |
| Average exchange rate | 1.1125 | 1.1549 |

1.2. Accounting principles

Assets and liabilities are valued with uniform principles. The most significant accounting principles are described in the following.

1.2.1. Tangible fixed assets

Tangible fixed assets are valued at their acquisition or construction cost, taking into account the necessary technical-economical depreciation and any necessary impairment. Depreciation is computed on a straight-line basis, considering the technical life of the assets generally accepted within the sector. Land is not depreciated. Tangible fixed assets under construction are reported at construction cost, tangible fixed assets under construction are not depreciated. The following minimum and maximum depreciation periods for each tangible fixed asset category are applied:

| | |
|---------------------------------|---------------|
| Civil works | 40 – 80 years |
| Electromechanical installations | 40 – 50 years |
| Electromechanical equipments | 15 – 35 years |
| Power lines | 30 – 55 years |
| Substations and transformers | 20 – 35 years |
| Buildings | 40 – 50 years |
| Photovoltaic plants | 20 – 30 years |
| Machinery and tools | 5 – 25 years |
| Vehicles | 3 – 10 years |
| IT equipments | 3 – 5 years |

Renewal or optimisation investments on plants are capitalised if useful life, capacity or performance of the involved plant are significantly improved.

1.2.2. Financial assets

Financial assets are reported at their cost value, adjusted for any impairment. For production participations, organised according to the principle of energy withdrawal at generation costs, the investment value exceeding the expected equity value at the end of the useful life of the power plant is depreciated on a straight-line basis according to the useful life of the power plant. Long-term advances in foreign currency are converted at the year-end exchange rates.

1.2.3. Intangible assets

Intangible assets are capitalised at their acquisition cost taking into account the necessary technical-economical amortisation and any necessary impairment. Amortisation is computed on a straight-line basis, considering the useful life of the asset. Usage right without expiration are amortised on the basis of the technical life of the involved plant (40-80 years).

1.2.4. Energy related and similar certificates

Energy related and similar certificates acquired within the trading portfolio are booked at their market value (mark to market) at the balance sheet date, changes in market value incurred during the financial year are recorded in the income statement within other energy income. Energy related and similar certificates, acquired for the purpose of hedging of the generation portfolio of AET, are booked at their weighted average purchase price.

1.2.5. Inventories

Inventories include small tools, spare parts and consumables. They are valued at their weighted average purchase price, taking into account any impairment for slow-moving items or obsolescence.

1.2.6. Receivables

Receivables are reported at their face value, taking into account potential losses. Foreign currency receivables are converted at year-end exchange rate.

1.2.7. Cash and cash equivalents

Cash and cash equivalents are reported at their face value and include cash in hand and account balances at financial institutions. Balances in foreign currencies are converted at year-end exchange rate.

1.2.8. Impairment

At each balance sheet date, all assets are tested for any impairment indicators. In case of existence of such indicators, the recoverable amount, that is the higher between the net selling price and the value in use, is computed. The value in use is generally computed on the basis of the present value of the expected future cash flows. If necessary, the carrying value is adjusted to the recoverable amount. In case of improvement of the recoverable amount, the carrying value is revaluated at maximum to the value according to the original depreciation scheme.

1.2.9. Provisions

Provisions are deemed to cover probable future disbursements related to legal or implicit obligations arising from past events. Long-term provisions are reported at the present value at the balance sheet day of the expected future disbursement.

1.2.10 Liabilities

All liabilities are reported at their nominal value. Liabilities in foreign currency are converted at year-end exchange rate.

1.2.11. Contingent liabilities

All contingent liabilities and other non-recognisable commitments existing at the balance sheet date are disclosed in the notes to the consolidated financial statements.

1.2.12. Energy forward sale and purchase transactions

Energy forward sale and purchase transactions, as well as the economic result of energy related transactions with financial instruments, made within the trading portfolio are booked at their market value at the balance sheet date (mark to market). Positive and negative replacement values (the difference between the market price at the balance sheet date and the contract price) are booked within other short-term assets and other short-term liabilities respectively. Changes in market value incurred during the financial year are recorded in the income statement within other energy income.

Energy forward sale and purchase transactions, as well as the economic result of transactions with energy related financial instruments, entered for the purpose of hedging of AET's generation portfolio are recognised in the income statement at delivery.

1.2.13. Revenues

Grid income and other operating income are recognised within the income statement when they are incurred. All revenues are recorded net of price reductions, sale taxes and value added taxes.

1.2.14. Pension funds

Pension benefits for employees hired by Swiss entities are covered by autonomous pension funds. In order to facilitate early retirement for its employees, AET also is affiliated with the "Fondo di pensionamento anticipato a favore del personale dell'Azienda Elettrica Ticinese". The financial implications of the pension schemes in place, regardless of their structure and legal form, are included in the consolidated financial statements. Surplus payments or deficits are determined on the basis of the latest available financial statements of the pension funds involved. Any liabilities (economic obligations) or any assets (economic benefits) in addition to the payment of the regular premiums are recorded in the financial statements. Economic obligations are recognised when pension liabilities are undercovered, generating a future cash outflow for the company in the form of restructuring contributions. Economic benefits consist of future positive cash flow resulting from the use of employer's contribution reserves or other benefits. The personnel employed in Italy is covered for pension according to the ordinary Italian pension scheme. The Group companies operating abroad thus have no obligation or benefit related to the pension schemes, which are not recorded in the financial statements. The yearly contributions, the yearly change in any economic obligations and economic benefits, as well as the change in the employer's contribution reserve, are recorded in the income statements under personnel expenses.

1.2.15. Income taxes

Income tax expense includes all current and deferred taxes. Deferred taxes arise from valuation differences between the tax financial statements and the financial statements used for consolidated reporting purposes. The Group parent company AET is not subject to any income tax.

1.2.16. Related party transactions

Transactions with associates include all transactions and debit / credit relationships with companies of which AET holds between 20% and 50% of the voting rights. Transactions with other related parties include transactions with the power generation / procurement companies Officine idroelettriche della Maggia SA, Officine idroelettriche di Blenio SA, Verzasca SA, Ritom SA held by the Canton Ticino as well as Kraftwerke Mattmark AG, AKEB Aktiengesellschaft für Kernenergie-Beteiligungen Luzern and Trianel Kohlekraftwerk Lünen GmbH & Co. KG held by AET for less than 20%. AET offtakes the respective share of energy and pays the related production / procurement costs.

2. Tangible fixed assets

| | Plants and equipment | Land and buildings | Tangible fixed assets under construction | Tangible fixed assets on lease | Other tangible fixed assets | Total |
|---|----------------------|--------------------|--|--------------------------------|-----------------------------|-----------------|
| In CHF 1,000 | | | | | | |
| Cost value at 01.01.2018 | 630,907 | 63,863 | 34,482 | 23,507 | 7,759 | 760,518 |
| Change in consolidation scope | -458 | -203 | - | -22,425 | -10 | -23,096 |
| Reclassification | 18,149 | 1,127 | -19,949 | - | 673 | - |
| Additions | 7,741 | 1 | 14,658 | - | 70 | 22,470 |
| Disposals | -47 | -633 | - | - | -181 | -861 |
| Conversion differences | -15 | -8 | - | -869 | -10 | -902 |
| Cost value at 31.12.2018 | 656,277 | 64,147 | 29,191 | 213 | 8,301 | 758,129 |
| Change in consolidation scope | - | - | - | - | - | - |
| Reclassification | 20,939 | 1,120 | -23,584 | - | 1,600 | 75 |
| Additions | 945 | 174 | 19,692 | - | 254 | 21,065 |
| Disposals | -4,680 | - | -171 | -205 | -422 | -5,478 |
| Conversion differences | - | - | - | -8 | -9 | -17 |
| Cost value at 31.12.2019 | 673,481 | 65,441 | 25,128 | - | 9,724 | 773,774 |
| Accumulated depreciation at 01.01.2018 | -388,601 | -11,617 | - | -21,056 | -6,528 | -427,802 |
| Change in consolidation scope | 179 | 20 | - | 20,638 | 9 | 20,846 |
| Reclassification | 364 | - | - | - | -364 | - |
| Depreciation | -14,940 | -934 | - | -440 | -429 | -16,743 |
| Additions | -4,028 | - | - | - | - | -4,028 |
| Disposals | 9 | 553 | - | - | 180 | 742 |
| Conversion differences | 6 | 1 | - | 789 | 10 | 806 |
| Accumulated depreciation at 31.12.2018 | -407,011 | -11,977 | - | -69 | -7,122 | -426,179 |
| Change in consolidation scope | - | - | - | - | - | - |
| Reclassification | - | - | - | - | - | - |
| Depreciation | -14,936 | -968 | - | -11 | -413 | -16,328 |
| Additions | -316 | - | - | - | - | -316 |
| Disposals | 4,242 | - | - | 77 | 419 | 4,738 |
| Conversion differences | - | - | - | 3 | 9 | 12 |
| Accumulated depreciation at 31.12.2019 | -418,021 | -12,945 | - | - | -7,107 | -438,073 |
| Net carrying amount at 01.01.2018 | 242,306 | 52,246 | 34,482 | 2,451 | 1,231 | 332,716 |
| Net carrying amount at 31.12.2018 | 249,266 | 52,170 | 29,191 | 144 | 1,179 | 331,950 |
| Net carrying amount at 31.12.2019 | 255,460 | 52,496 | 25,128 | - | 2,617 | 335,701 |

3. Participations in associates

| | 31.12.2019 | 31.12.2018 |
|----------------------------------|---------------|---------------|
| In CHF 1,000 | | |
| Opening balance | 77,481 | 80,537 |
| Acquisitions / capital increases | 368 | – |
| Disposals | 9 | – |
| Change in consolidation scope | 0 | – |
| Conversion differences | –619 | –112 |
| Result from associates | 7,255 | 6,622 |
| Received dividends | –4,170 | –4,160 |
| Impairment | 295 | –5,406 |
| Closing balance | 80,619 | 77,481 |

Equity method values of associates to 31.12.2019 (according Swiss GAAP FER).

| | Metanord SA | Nord Energia Group | SES Group ¹ | Various | Total |
|--|---------------|--------------------|------------------------|----------------|----------------|
| In CHF 1,000 | | | | | |
| Non-current assets | 58,504 | 8,504 | 439,691 | 47 | 506,746 |
| Current assets | 2,596 | 24,008 | 69,283 | 1,126 | 97,013 |
| Assets | 61,100 | 32,512 | 508,974 | 1,173 | 603,759 |
| Equity | 14,608 | 24,466 | 234,958 | 1,037 | 275,069 |
| Long-term liabilities | 44,881 | 2,956 | 186,211 | – | 234,048 |
| Current liabilities | 1,611 | 5,090 | 87,805 | 136 | 94,642 |
| Liabilities and equity | 61,100 | 32,512 | 508,974 | 1,173 | 603,759 |
| Revenues | 7,075 | 18,660 | 144,185 | – | 169,920 |
| EBITDA | 1,106 | 10,916 | 40,813 | –108 | 52,727 |
| Net result | –886 | 8,090 | 16,920 | –95 | 24,029 |
| AET's shareholdings, in % | 33.33% | 40% | 30% | various | |
| AET's share of the equity | 4,869 | 9,786 | 70,487 | 346 | 85,488 |
| Impairments | –4,869 | – | – | – | –4,869 |
| Value of participations in associates | – | 9,786 | 70,487 | 346 | 80,619 |

¹ Excluding Calore SA, Senco Holding SA and Senco Sagl, because fully consolidated

The shares of Metanord SA are pledged in favour of creditors of the company. The assets of the company are impaired on the basis of the present value of the expected cash flows.

4. Long-term securities

| | 31.12.2019 | 31.12.2018 |
|--|---------------|---------------|
| In CHF 1,000 | | |
| Trianel Kohlekraftwerk Lünen GmbH & Co. KG | 13,215 | 14,067 |
| Swissgrid AG | 12,589 | 12,589 |
| Kraftwerke Mattmark AG | 11,331 | 11,488 |
| AKEB Aktiengesellschaft für Kernenergie-Beteiligungen Luzern | 6,300 | 6,300 |
| Terravent AG | 2,250 | 2,250 |
| Other | 244 | 289 |
| Total | 45,929 | 46,983 |

The participation into Trianel Kohlekraftwerk Lünen GmbH & Co. KG is amortised on a straight-line basis according to the duration of the power purchase agreement in force.

The investment into Kraftwerke Mattmark AG is amortised on a straight-line basis to the equity value expected at expiration of the concession.

5. Advances and loans to participations

| | 31.12.2019 | 31.12.2018 |
|--------------|---------------|---------------|
| In CHF 1,000 | | |
| Terravent AG | 11,604 | 11,925 |
| Metanord SA | 8,200 | 8,200 |
| Other | – | 10 |
| Total | 19,804 | 20,135 |

The advances to Terravent AG and Metanord SA are entirely subordinated.

6. Intangible assets

| | Usage rights | Energy procurement rights | Intangible assets under development | Other intangible assets | Total |
|---|----------------|---------------------------|-------------------------------------|-------------------------|-----------------|
| In CHF 1,000 | | | | | |
| Cost value at 01.01.2018 | 26,612 | 144,555 | 3,161 | 12,400 | 186,728 |
| Change in consolidation scope | – | – | – | –2,508 | –2,508 |
| Reclassification | – | – | –210 | 210 | – |
| Additions | 647 | – | 456 | – | 1,103 |
| Disposals | –185 | – | – | – | –185 |
| Conversion differences | – | – | – | –114 | –114 |
| Cost value at 31.12.2018 | 27,074 | 144,555 | 3,407 | 9,988 | 185,024 |
| Change in consolidation scope | – | – | – | – | – |
| Reclassification | – | – | –251 | 176 | –75 |
| Additions | – | – | 628 | – | 628 |
| Disposals | – | – | – | –285 | –285 |
| Conversion differences | – | – | – | –17 | –17 |
| Cost value at 31.12.2019 | 27,074 | 144,555 | 3,784 | 9,862 | 185,275 |
| Accumulated amortisation at 01.01.2018 | –18,589 | –135,557 | – | –11,146 | –165,292 |
| Change in consolidation scope | – | – | – | 2,508 | 2,508 |
| Reclassification | – | – | – | – | – |
| Amortisation | –341 | –900 | – | –454 | –1,695 |
| Additions | –63 | – | – | – | –63 |
| Disposals | 185 | – | – | – | 185 |
| Impairments | – | 8,500 | – | – | 8,500 |
| Conversion differences | – | – | – | 113 | 113 |
| Accumulated amortisation at 31.12.2018 | –18,808 | –127,957 | – | –8,979 | –155,744 |
| Change in consolidation scope | – | – | – | – | – |
| Reclassification | – | – | – | – | – |
| Amortisation | –286 | –1,844 | – | –414 | –2,544 |
| Additions | – | – | – | – | – |
| Disposals | – | – | – | 285 | 285 |
| Impairments | – | –8,500 | – | – | –8,500 |
| Conversion differences | – | – | – | 17 | 17 |
| Accumulated amortisation at 31.12.2019 | –19,094 | –138,301 | – | –9,091 | –166,486 |
| Net carrying amount at 01.01.2018 | 8,023 | 8,998 | 3,161 | 1,254 | 21,436 |
| Net carrying amount at 31.12.2018 | 8,266 | 16,598 | 3,407 | 1,009 | 29,280 |
| Net carrying amount at 31.12.2019 | 7,980 | 6,254 | 3,784 | 771 | 18,789 |

Usage rights include rights for utilisation of third party plants, in particular related to exclusive usage of third party power grid plants, as well as concession fees paid in respect of hydro power concessions.

The energy procurement rights mainly refer to an energy procurement contract with EDF (expiration 31.12.2027); it has been impaired due to the prevailing market conditions. In 2019 an increase of the impairment has been made necessary by the development of the expected market parameters.

7. Other short-term assets

| | 31.12.2019 | 31.12.2018 |
|--|---------------|---------------|
| In CHF 1,000 | | |
| Other short-term receivables from associates | 361 | 282 |
| Other short-term receivables from other related parties | 729 | 4,685 |
| Other short-term receivables from third parties | 21,127 | 34,264 |
| Positive replacement values of transactions valued at market value | 25,752 | 35,304 |
| Energy related and similar certificates | 4,068 | 4,619 |
| Inventories of spare, spare parts and consumables | 3,335 | 2,087 |
| Total | 55,372 | 81,241 |

8. Prepayments and accrued income

| | 31.12.2019 | 31.12.2018 |
|-----------------------|----------------|---------------|
| In CHF 1,000 | | |
| Associates | 4,615 | 5,221 |
| Other related parties | 8,445 | 9,788 |
| Third parties | 95,685 | 82,207 |
| Work in progress | 923 | 1,126 |
| Total | 109,668 | 98,342 |

The balance includes amounts in foreign currency for EUR 62.6 million (EUR 58.1 million at 31.12.2018).

Accrued income mainly includes the value of energy sold during the last reporting month and not yet invoiced.

9. Receivables from goods and services

| | 31.12.2019 | 31.12.2018 |
|--|---------------|---------------|
| In CHF 1,000 | | |
| Associates | 4,290 | 4,044 |
| Other related parties | 328 | 584 |
| Third parties | 16,186 | 13,807 |
| ./. allowance for doubtful receivables | -3,180 | -3,369 |
| Total | 17,624 | 15,066 |

The balance includes amounts in foreign currency for EUR 1.3 million (EUR 0.7 million at 31.12.2018).

10. Cash and cash equivalents

| | 31.12.2019 | 31.12.2018 |
|--------------------------------|---------------|---------------|
| In CHF 1,000 | | |
| Balances in CHF | 80,488 | 51,637 |
| Balances in foreign currencies | 6,971 | 21,964 |
| Total | 87,459 | 73,601 |

11. Provisions

| | Energy onerous contracts | Current and deferred taxes | Personnel related expenses | Other | Total |
|--------------------------------------|--------------------------------|----------------------------------|----------------------------------|--------------|---------------|
| In CHF 1,000 | | | | | |
| Carrying amount at 01.01.2018 | 10,353 | 481 | 2,417 | 3,050 | 16,301 |
| <i>thereof long-term</i> | 9,396 | 220 | 54 | 137 | 9,807 |
| <i>thereof short-term</i> | 957 | 261 | 2,363 | 2,913 | 6,494 |
| Change in consolidation scope | – | – | –60 | –131 | –191 |
| Increase | 2,648 | 258 | 37 | 915 | 3,858 |
| Utilisation | –957 | –186 | –202 | –634 | –1,979 |
| Release | – | –56 | –40 | –542 | –638 |
| Carrying amount at 31.12.2018 | 12,044 | 497 | 2,152 | 2,658 | 17,351 |
| <i>thereof long-term</i> | 11,437 | 170 | – | 1,236 | 12,843 |
| <i>thereof short-term</i> | 607 | 327 | 2,152 | 1,422 | 4,508 |
| Change in consolidation scope | – | – | – | – | – |
| Increase | – | 400 | 1,346 | 295 | 2,041 |
| Utilisation | –607 | –84 | – | –68 | –759 |
| Release | –433 | –17 | –34 | –544 | –1,028 |
| Carrying amount at 31.12.2019 | 11,004 | 796 | 3,464 | 2,341 | 17,605 |
| <i>thereof long-term</i> | 10,294 | 157 | – | 1,322 | 11,773 |
| <i>thereof short-term</i> | 710 | 639 | 3,464 | 1,019 | 5,832 |

Provisions for energy onerous contracts include the negative present value of an energy purchase agreement with the Azienda Cantonale dei Rifiuti. The provision is determined according to the current energy price expectations for the contract period (2030) and the current EUR/CHF exchange rate.

Deferred income taxes are computed considering a 20% income tax rate.

The provision for personnel related expenses represents the value of overtime worked and not-taken holidays.

12. Long-term financial liabilities

| | 31.12.2019 | 31.12.2018 |
|--|----------------|----------------|
| In CHF 1,000 | | |
| Liabilities due between 1 and 5 years | 87,625 | 81,038 |
| Liabilities due between 5 and 10 years | 108,000 | 93,000 |
| Liabilities due after 10 years | 84,000 | 109,000 |
| Total | 279,625 | 283,038 |

13. Other short-term liabilities

| | 31.12.2019 | 31.12.2018 |
|--|---------------|---------------|
| In CHF 1,000 | | |
| Other short-term liabilities towards associates | 64 | 86 |
| Other short-term liabilities towards other related parties | 3,013 | – |
| Other short-term liabilities towards third parties | 7,379 | 10,518 |
| Negative replacement values of transactions valued at market value | 15,474 | 33,264 |
| Total | 25,930 | 43,868 |

14. Short-term financial liabilities

| | 31.12.2019 | 31.12.2018 |
|---|--------------|--------------|
| In CHF 1,000 | | |
| Financial liabilities in CHF | 5,100 | 100 |
| Financial liabilities in foreign currency | 2,174 | 6,779 |
| Total | 7,274 | 6,879 |

15. Accrued liabilities and deferred income

| | 31.12.2019 | 31.12.2018 |
|-----------------------|---------------|---------------|
| In CHF 1,000 | | |
| Associates | 653 | 109 |
| Other related parties | 1,434 | 4,467 |
| Third parties | 89,331 | 79,663 |
| Total | 91,418 | 84,239 |

The balance includes amounts in foreign currency for EUR 57.4 million (EUR 52.7 million at 31.12.2018).

Accrued liabilities mainly includes the value of energy purchased during the last reporting month and not yet invoiced.

16. Payables from goods and services

| | 31.12.2019 | 31.12.2018 |
|-----------------------|---------------|---------------|
| In CHF 1,000 | | |
| Associates | 353 | 948 |
| Other related parties | 3,386 | 3,595 |
| Third parties | 11,424 | 6,248 |
| Total | 15,163 | 10,791 |

The balance includes amounts in foreign currency for EUR 6.3 million (EUR 3.6 million at 31.12.2018).

17. Energy income

| | 2019 | 2018 |
|-----------------------------|----------------|----------------|
| In CHF 1,000 | | |
| Energy sales in Switzerland | 355,212 | 296,100 |
| Energy sales in Italy | 51,814 | 46,767 |
| Energy sales in Germany | 431,267 | 336,459 |
| Energy sales in France | 98,059 | 100,191 |
| Other energy income | 25,022 | 28,502 |
| Total | 961,374 | 808,019 |

The item other energy income includes the economic effect of the mark to market valuation of energy and CO₂ emission rights forward transactions acquired within the trading portfolio.

18. Other operating income

| | 2019 | 2018 |
|----------------------|---------------|---------------|
| In CHF 1,000 | | |
| Income from services | 8,066 | 10,150 |
| Own work capitalised | 4,654 | 3,934 |
| Other | 4,580 | 4,544 |
| Total | 17,300 | 18,628 |

19. Energy purchases

| | 2019 | 2018 |
|---------------------------------|-----------------|-----------------|
| In CHF 1,000 | | |
| Purchases from participations | -82,605 | -95,093 |
| Long-term contractual purchases | -33,473 | -33,340 |
| Purchases on the market | -780,644 | -650,515 |
| Total | -896,722 | -778,948 |

The expenses related to the energy offtaken from the production participations held by the Canton Ticino (Officine idroelettriche della Maggia SA, Officine idroelettriche di Blenio SA and Verzasca SA) are included within purchases from participations.

20. Personnel expenses

| | 2019 | 2018 |
|-------------------------------------|----------------|----------------|
| In CHF 1,000 | | |
| Salaries and other compensation | -25,276 | -23,471 |
| Social contributions | -5,472 | -5,300 |
| Other expenses | -657 | -508 |
| Recoveries from insurance companies | 213 | 243 |
| Total | -31,192 | -29,036 |

Employees of the Group

| | 31.12.2019 | 31.12.2018 |
|----------------------|--------------|--------------|
| Full time equivalent | | |
| Permanent employees | 231.9 | 227.6 |
| Auxiliary employees | 9.7 | 7.7 |
| Apprentices | 31.0 | 30.0 |
| Total | 272.6 | 265.3 |

In 2019 the total compensation of the six executive committee members has been of CHF 1.5 million (gross of the legal contributions).

21. Other operating expenses

| | 2019 | 2018 |
|-------------------------------------|----------------|----------------|
| In CHF 1,000 | | |
| Water fees | -14,860 | -14,860 |
| Local taxes and other contributions | -4,056 | -3,829 |
| Other | -5,748 | -8,667 |
| Total | -24,664 | -27,356 |

Other contributions include the payment of accumulation contributions to power plants upstream to AET's plants for CHF 1.2 million.

22. Financial result

| | 2019 | 2018 |
|-----------------------------------|---------------|---------------|
| In CHF 1,000 | | |
| Interest income | 525 | 274 |
| Income from participations | 1,045 | 970 |
| Exchange rate differences | 738 | 938 |
| Interest payments and commissions | -6,525 | -6,902 |
| Other financial expenses | -110 | -61 |
| Total | -4,327 | -4,781 |

Exchange rate differences include the cost of foreign exchange currency hedging operations.

23. Extraordinary result

| | 2019 | 2018 |
|---|---------------|---------------|
| In CHF 1,000 | | |
| Profit from disposal of non-current assets | 688 | 2,642 |
| Release of provisions | 566 | – |
| Reversal of impairments on non-current assets | 295 | 8,500 |
| Other extraordinary income | 549 | 9,965 |
| Impairments of non-current assets | –8,543 | –5,406 |
| Increase of provisions | –185 | –3,169 |
| Other extraordinary expenses | –1,523 | –254 |
| Total | –8,153 | 12,278 |

The impairments increase relates to the energy procurement contract with EDF, whose value has been reassessed because of the deteriorated economic expectations for the upcoming years.

24. Goodwill

The positive difference between the acquisition cost of a participation and its equity value is treated as goodwill. It is offset with retained earnings without impact on the income statement in the acquisition year.

If the goodwill paid were capitalised on the balance sheet and amortised on a straight-line basis over 5 years, the consolidated balance sheet and the consolidated income statement would present the following variations:

| | 2019 | 2018 |
|-----------------------------------|-------|-------|
| In CHF 1,000 | | |
| Goodwill, historical cost | 1,493 | 2,167 |
| Goodwill, net book value | 1,194 | – |
| Equity (retained earnings) | 1,493 | – |
| Amortisation goodwill of the year | –299 | –83 |
| Net result | –299 | –83 |

25. Contingent liabilities

AET issued guarantees in favour of financing parts of former participations, which have been disposed. As of 31.12.2019 those had a value of CHF 14.0 million (31.12.2018: CHF 14.5 million); in the context of the sales of those participations, AET has been granted with pledges or guarantees in order to be kept armless from those exposures.

26. Other non-recognisable commitments

In the context of the management of its energy portfolio, the AET Group has entered into transactions on the futures markets and finalised various long-term energy purchase agreements involving irrevocable obligations.

Energy purchase contracts and market transactions

| | Market transactions | Long-term contracts |
|--------------------------------|---------------------|---------------------|
| Cumulative volume in CHF 1,000 | | |
| 2020 | 565,003 | 34,926 |
| from 2 to 5 year | 285,760 | 141,439 |
| over 5 year | – | 121,616 |

AET Group further has an offtake commitment for the energy produced by its own power generation participations and the participations of the Canton Ticino, paying its production cost quota. The duration of these obligations is undetermined and depends on the future developments of those participations.

AET Group also has entered into a cross-border interconnection capacity agreement with expiration 2022 and with an annual volume of CHF 6.9 million (value of the indexed contact based on 2019 prices and year-end exchange rate).

At 31.12.2019 AET Group has derivative financial instruments subscribed for interest rate hedging purpose for a contractual volume of CHF 10 million (31.12.2018: CHF 10 million).

Forward currency operations

| 31.12.2019 | Maturity year 2020 | | Maturity year 2021 | |
|------------|-------------------------------|--------------------------------------|-------------------------------|--------------------------------------|
| | Amount in currency (in 1,000) | Average exchange rate (currency/CHF) | Amount in currency (in 1,000) | Average exchange rate (currency/CHF) |
| Operation | | | | |
| Buy EUR | 11,800 | 1.10 | – | – |
| Sell EUR | 17,000 | 1.11 | – | – |

| 31.12.2018 | Maturity year 2019 | | Maturity year 2020 | |
|------------|-------------------------------|--------------------------------------|-------------------------------|--------------------------------------|
| | Amount in currency (in 1,000) | Average exchange rate (currency/CHF) | Amount in currency (in 1,000) | Average exchange rate (currency/CHF) |
| Operation | | | | |
| Sell EUR | 36,000 | 1.14 | – | – |

Forward foreign currency transactions have been entered into with the purpose of hedging expected future foreign currency cash flows.

At 31.12.2019 Group AET has no off-balance sheet lease commitments (31.12.2018: unchanged).

27. Pension benefit obligations

| CPE Fondazione di Previdenza Energia | Coverage rate | Economic benefit/ economic obligations for the Group | Change recognised in the income statement | Expense for contributions of the period | Pension benefit expense within personnel expenses |
|--------------------------------------|---------------|--|---|---|---|
| In CHF 1,000 | | | | | |
| 31.12.2019 | 109.2% | – | – | –2,477 | –2,477 |
| 31.12.2018 | 104.4% | – | – | –2,334 | –2,334 |

Starting from 01.04.2017 the Fondo Pensionamento Anticipato dell'AET only covers "OASI bridge-benefits", all other coverages previously granted have been integrated within the CPE Fondazione di Previdenza Energia pension scheme.

28. Transactions with related parties

Transactions with associates

| | 2019 | 2018 |
|----------------------------|--------|--------|
| In CHF 1,000 | | |
| Energy income | 27,131 | 24,423 |
| Service and other income | 15,831 | 17,118 |
| Financial income | – | – |
| Energy purchases | 164 | 80 |
| Service and other expenses | 10,260 | 10,054 |

Transactions with other related parties

| | 2019 | 2018 |
|----------------------------|--------|--------|
| In CHF 1,000 | | |
| Energy income | 927 | 1,212 |
| Service and other income | 2,304 | 2,346 |
| Financial income | 735 | 532 |
| Energy purchases | 81,880 | 94,566 |
| Service and other expenses | 2,222 | 2,153 |

29. Risk assessment

The Board of Directors and Management give the utmost attention and deploy the necessary resources for the valuation and management of risks in order to adhere to the standards of the sector. The management and valuation of the company's risks have been integrated into the company's operating procedures, in order to guarantee the maximum effectiveness.

From a financial point of view the AET Group is exposed to following main risk factors:

Volume risk: is the risk associated with the variation in the sales volume, respectively of production volumes compared to forecasts. Its principal cause is the meteorological risk in that the meteorological deviations from the long-term averages cause variations in consumption and production from the hydroelectric plants that are difficult to predict. In the long-term the AET Group manages this risk by diversifying its supplies with long-term contracts and participations. In the medium to short-term this risk is managed with a gradual rebalancing of the portfolio using updated forecasts and historical data. In addition the AET Group can count on reserve capacity from its own hydroelectric plants.

Market risk: is the risk associated with the variations in the price of energy on the markets and the fluctuation of exchange rates. The AET Group manages this risk by monitoring the evolutions and the expectations of market prices and consequently hedges the positions. The foreign exchange risk is managed through hedging operations. Market risks mostly have an effect on the quantity of energy sold and produced resulting from the volume risk that can not be efficiently hedged in advance because unknown.

Counterparty risk: is the risk of loss related to payment default of commercial counterparties. The wholesale activity is mainly performed with large Swiss and bordering countries power companies. Exposure limits are determined for each counterparty, based on their economic and financial situation. Counterparty risk related to the Swiss commercial / distribution activity is managed through the constant monitoring of the receivable positions, the subscription of receivables insurances, the request of bank guarantees or deposits.

Regulatory risk: relates to the introduction or modification of laws, acts or rules at Swiss or European level, which might have an impact on the activity of the AET Group. The AET Group constantly monitors the regulatory developments, adopting the necessary adjustments.

30. Subsequent events

2019: on the 11.03.2020 the world health organisation has declared the coronavirus (COVID-19) outbreak pandemic, which has reached, among others, vast European territories. Switzerland and the Canton Ticino in particular have been strongly affected too. Like many other European governments, the Swiss government has declared the “extraordinary situation” and has imposed a lockdown, significantly restricting the economic and social activities. This caused sharp energy consumption reductions, which caused a major price reduction of all energy commodities. As of today, it’s not yet possible to quantify the economic and financial impact for AET, an impact is expected on the 2020 operating result, whereas no material impact is expected on the balance sheet positions.

2018: no significant event.



The specialised staff of AET's substations team installs and maintains all the high-voltage transformation plants of the company network as well as third party plants.

Audit report by KPMG SA on the consolidated financial statements



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Audit
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Report of the Statutory Auditor to the Gran Consiglio of Repubblica e Cantone Ticino

Report of the Statutory Auditor on the Consolidated Financial Statements

As statutory auditor, we have audited the accompanying consolidated financial statements (from page 25 to page 50) of Azienda elettrica ticinese, which comprise the balance sheet, income statement, cash flow statement, statement of changes in equity and notes for the year ended on December 31, 2019.

Board of Directors' Responsibility

The Board of Directors is responsible for the preparation of the consolidated financial statements in accordance with Swiss GAAP FER, the requirements of Swiss law and Act of Azienda elettrica ticinese. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Swiss law, Swiss Auditing Standards and Act of the Azienda elettrica ticinese. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements for the year ended on December 31, 2019 give a true and fair view of the financial position, the results of operations and the cash flows in accordance with Swiss GAAP FER and comply with Swiss law and Act of Azienda elettrica ticinese.



Azienda elettrica ticinese, Bellinzona
Report of the Statutory Auditor
on the Consolidated Financial Statements
to the Gran Consiglio of Repubblica e Cantone Ticino

Report on Other Legal Requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

KPMG SA

Orlando Lanfranchi
Licensed Audit Expert
Auditor in Charge

Mathias Marzorati
Licensed Audit Expert

Lugano, April 21, 2020



The switchgears allow to feed the energy produced by the Ritom and Stalvedro hydroelectric power plants into the 50 kV network, respectively to supply the railway network from the 50 kV network through the frequency converter.





AET guarantees many years of experience, attention to detail and professionalism.





AET Grid also builds and maintains overhead and cable power lines in high and medium voltage.

Financial statements

Balance sheet

Assets

| | | 31.12.2019 | 31.12.2018 |
|--|-------|----------------|----------------|
| In CHF 1,000 | Notes | | |
| Plants and equipment | | 210,452 | 208,344 |
| Land and buildings | | 49,582 | 49,817 |
| Tangible fixed assets under construction | | 16,346 | 25,557 |
| Other tangible fixed assets | | 2,607 | 1,156 |
| Tangible fixed assets | 2 | 278,987 | 284,874 |
| Participations | 3 | 44,301 | 39,190 |
| Long-term securities | 4 | 45,685 | 46,719 |
| Advances and loans to participations | 5 | 37,194 | 53,705 |
| Other financial assets | | 452 | 608 |
| Financial assets | | 127,632 | 140,222 |
| Usage rights | | 7,609 | 7,830 |
| Energy procurement rights | | 6,254 | 16,598 |
| Intangible assets under development | | 1,679 | 1,232 |
| Other intangible assets | | 771 | 1,009 |
| Intangible assets | 6 | 16,313 | 26,669 |
| Non-current assets | | 422,932 | 451,765 |
| Other short-term assets | 7 | 43,022 | 57,304 |
| Prepayments and accrued income | 8 | 109,414 | 98,196 |
| Receivables from goods and services | 9 | 15,775 | 14,527 |
| Cash and cash equivalents | 10 | 77,303 | 59,465 |
| Current assets | | 245,514 | 229,492 |
| Assets | | 668,446 | 681,257 |

Liabilities and equity

| | | 31.12.2019 | 31.12.2018 |
|---|-------|----------------|----------------|
| In CHF 1,000 | Notes | | |
| Endowment capital | | 40,000 | 40,000 |
| General reserves | | 67,000 | 67,000 |
| Statutory reserves | | 51,000 | 51,000 |
| Results carried forward | | 100,301 | 112,331 |
| Net result | | 1,256 | -8,830 |
| Equity | | 259,557 | 261,501 |
| Long-term provisions | 11 | 10,294 | 11,437 |
| Other long-term liabilities | | 1,137 | 1,333 |
| Long-term financial liabilities | 12 | 266,000 | 266,000 |
| Long-term liabilities | | 277,431 | 278,770 |
| Short-term provisions | 11 | 4,374 | 3,367 |
| Other short-term liabilities | 13 | 25,594 | 41,857 |
| Short-term financial liabilities | 14 | 2,174 | 6,761 |
| Accrued liabilities and deferred income | 15 | 84,737 | 77,787 |
| Payables from goods and services | 16 | 14,579 | 11,214 |
| Current liabilities | | 131,458 | 140,986 |
| Liabilities | | 408,889 | 419,756 |
| Liabilities and equity | | 668,446 | 681,257 |

Income statement

| | | 2019 | 2018 |
|---------------------------------------|-------|-------------------|-----------------|
| In CHF 1,000 | Notes | | |
| Operating income | | | |
| Energy income | 17 | 959,263 | 806,089 |
| Grid income | | 38,866 | 39,398 |
| Other operating income | 18 | 19,787 | 20,225 |
| Operating income | | 1,017,916 | 865,712 |
| Operating expenses | | | |
| Energy purchases | 19 | -915,710 | -791,002 |
| Grid expenses | | -13,902 | -15,537 |
| Personnel expenses | 20 | -30,457 | -27,967 |
| Service and material expenses | | -7,826 | -6,757 |
| Depreciation on tangible fixed assets | 2 | -13,662 | -13,853 |
| Amortisation on intangible assets | 6 | -2,479 | -1,621 |
| Other depreciation and amortisation | | -1,260 | -1,260 |
| Other operating expenses | 21 | -21,051 | -21,167 |
| Operating expenses | | -1,006,347 | -879,164 |
| Operating result | | 11,569 | -13,452 |
| Financial result | 22 | -2,565 | -3,335 |
| Ordinary result | | 9,004 | -16,787 |
| Non-operating result | | - | - |
| Extraordinary result | 23 | -7,748 | 7,957 |
| Net result | | 1,256 | -8,830 |

Cash flow statement

| | 2019 | 2018 |
|--|---------------|----------------|
| In CHF 1,000 | | |
| Net result | 1,256 | -8,830 |
| Depreciation on tangible fixed assets | 13,662 | 13,853 |
| Amortisation on intangible assets | 2,479 | 1,621 |
| Other depreciation and amortisation | 1,260 | 1,260 |
| Change in provisions | -136 | 667 |
| Change in impairments | 8,500 | -573 |
| Profit / loss from disposal of non-current assets | 25 | -670 |
| Other non cash expenses and income | 137 | 502 |
| Change in receivables, prepayments and accrued income and other short-term assets | 323 | -5,090 |
| Change in payables, accrued liabilities and deferred income and other short-term liabilities | -5,948 | 17,313 |
| Cash flow from operating activities | 21,558 | 20,053 |
| Outflows for investment in tangible fixed assets | -8,385 | -12,238 |
| Inflows from disposal of tangible fixed assets | 137 | 21 |
| Outflows for investment in intangible assets | -623 | -949 |
| Inflows from disposal of intangible assets | - | - |
| Outflows for investment in financial assets | -8,715 | -15,780 |
| Inflows from disposal of financial assets | 21,171 | 17,184 |
| Cash flow from investing activities | 3,585 | -11,762 |
| Issuance / repayment of short-term financial liabilities | -3,910 | -42,670 |
| Issuance / repayment of long-term financial liabilities | -195 | 1,333 |
| Interests on capital, due to the State | -3,200 | -3,200 |
| Distribution of dividends to the State | - | - |
| Cash flow from financing activities | -7,305 | -44,537 |
| Cash and cash equivalents at the beginning of the year | 59,465 | 95,711 |
| Cash flow | 17,838 | -36,246 |
| Cash and cash equivalents at the end of the year | 77,303 | 59,465 |

Statement of changes in equity

| | Endowment capital | General reserves | Statutory reserves | Results carried forward | Net result | Equity |
|--|-------------------|------------------|--------------------|-------------------------|----------------|----------------|
| In CHF 1,000 | | | | | | |
| Equity at 01.01.2018 | 40,000 | 67,000 | 51,000 | 137,047 | -21,516 | 273,531 |
| Allocation of result | - | - | - | -21,516 | 21,516 | - |
| Interests on capital, due to the State | - | - | - | -3,200 | - | -3,200 |
| Distribution of dividends | - | - | - | - | - | - |
| Net result 2018 | - | - | - | - | -8,830 | -8,830 |
| Equity at 31.12.2018 | 40,000 | 67,000 | 51,000 | 112,331 | -8,830 | 261,501 |
| Allocation of result | - | - | - | -8,830 | 8,830 | - |
| Interests on capital, due to the State | - | - | - | -3,200 | - | -3,200 |
| Distribution of dividends | - | - | - | - | - | - |
| Net result 2019 | - | - | - | - | 1,256 | 1,256 |
| Equity at 31.12.2019 | 40,000 | 67,000 | 51,000 | 100,301 | 1,256 | 259,557 |

Notes to the financial statements

1. Accounting principles

The financial statements 2019 of the Azienda Elettrica Ticinese (AET) were prepared in accordance to the Swiss GAAP FER as a whole and approved by the Board of Directors on the 21.04.2020.

Assets and liabilities are valued with uniform principles. The most significant accounting principles are described in the following.

1.1. Tangible fixed assets

Tangible fixed assets are valued at their acquisition or construction cost, taking into account the necessary technical-economical depreciation and any necessary impairment. Depreciation is computed on a straight-line basis, considering the technical life of the assets generally accepted within the sector. Land is not depreciated. Tangible fixed assets under construction are reported at construction cost, tangible fixed assets under construction are not depreciated. The following minimum and maximum depreciation periods for each tangible fixed asset category are applied:

| | |
|---------------------------------|---------------|
| Civil works | 40 – 80 years |
| Electromechanical installations | 40 – 50 years |
| Electromechanical equipments | 15 – 35 years |
| Power lines | 30 – 55 years |
| Substations and transformers | 20 – 35 years |
| Buildings | 40 – 50 years |
| Photovoltaic plants | 20 – 30 years |
| Machinery and tools | 5 – 25 years |
| Vehicles | 3 – 10 years |
| IT equipments | 3 – 5 years |

Renewal or optimisation investments on plants are capitalised if useful life, capacity or performance of the involved plant are significantly improved.

1.2. Financial assets

Financial assets are reported at their cost value, adjusted for any impairment. For production participations, organised according to the principle of energy withdrawal at generation costs, the investment value exceeding the expected equity value at the end of the useful life of the power plant is depreciated on a straight-line basis according to the useful life of the power plant. Long-term advances in foreign currency are converted at the year-end exchange rates.

1.3. Intangible assets

Intangible assets are capitalised at their acquisition cost taking into account the necessary technical-economical amortisation and any necessary impairment. Amortisation is computed on a straight-line basis, considering the useful life of the asset. Usage right without expiration are amortised on the basis of the technical life of the involved plant (40-80 years).

1.4. Energy related and similar certificates

Energy related and similar certificates acquired within the trading portfolio are booked at their market value (mark to market) at the balance sheet date, changes in market value incurred during the financial year are recorded in the income statement within other energy income. Energy related and similar certificates, acquired for the purpose of hedging of the generation portfolio of AET, are booked at their weighted average purchase price.

1.5. Inventories

Inventories include small tools, spare parts and consumables. They are valued at their weighted average purchase price, taking into account any impairment for slow-moving items or obsolescence.

1.6. Receivables

Receivables are reported at their face value, taking into account potential losses. Foreign currency receivables are converted at year-end exchange rate.

1.7. Cash and cash equivalents

Cash and cash equivalents are reported at their face value and include cash in hand and account balances at financial institutions. Balances in foreign currencies are converted at year-end exchange rate.

1.8. Impairment

At each balance sheet date, all assets are tested for any impairment indicators. In case of existence of such indicators, the recoverable amount, that is the higher between the net selling price and the value in use, is computed. The value in use is generally computed on the basis of the present value of the expected future cash flows. If necessary, the carrying value is adjusted to the recoverable amount. In case of improvement of the recoverable amount, the carrying value is revaluated at maximum to the value according to the original depreciation scheme.

1.9. Provisions

Provisions are deemed to cover probable future disbursements related to legal or implicit obligations arising from past events. Long-term provisions are reported at the present value at the balance sheet day of the expected future disbursement.

1.10. Liabilities

All liabilities are reported at their nominal value. Liabilities in foreign currency are converted at year-end exchange rate.

1.11. Contingent liabilities

All contingent liabilities and other non-recognisable commitments existing at the balance sheet date are disclosed in the notes to the financial statements.

1.12. Energy forward sale and purchase transactions

Energy forward sale and purchase transactions, as well as the economic result of energy related transactions with financial instruments, made within the trading portfolio are booked at their market value at the balance sheet date (mark to market). Positive and negative replacement values (the difference between the market price at the balance sheet date and the contract price) are booked within other short-term assets and other short-term liabilities respectively. Changes in market value incurred during the financial year are recorded in the income statement within other energy income.

Energy forward sale and purchase transactions, as well as the economic result of transactions with energy related financial instruments, entered for the purpose of hedging of AET's generation portfolio are recognised in the income statement at delivery.

1.13. Revenues

Grid income and other operating income are recognised within the income statement when they are incurred. All revenues are recorded net of price reductions, sale taxes and value added taxes.

1.14. Pension funds

The personnel of AET is affiliated to a multi-employer independent pension institution of the energy sector. In order to facilitate early retirement for its employees, AET also is affiliated with the "Fondo di pensionamento anticipato a favore del personale dell'Azienda Elettrica Ticinese". The financial implications of the pension schemes in place, regardless of their structure and legal form, are included in the financial statements. Surplus payments or deficits are determined on the basis of the latest available financial statements of the pension funds involved. Any liabilities (economic obligations) or any assets (economic benefits) in addition to the payment of the regular premiums are recorded in the financial statements. Economic obligations are recognised when pension liabilities are undercovered, generating a future cash outflow for the company in the form of restructuring contributions. Economic benefits consist of future positive cash flow resulting from the use of employer's contribution reserves or other benefits. The yearly contributions, the yearly change in any economic obligations and economic benefits, as well as the change in the employer's contribution reserve, are recorded in the income statements under personnel expenses.

1.15. Income taxes

AET is not subject to any income tax.

1.16. Related party transactions

Transactions with subsidiaries include all transactions and debit / credit relationships with companies controlled by AET through its voting rights majority. Transactions with associates include all transactions and debit / credit relationships with companies of which AET holds between 20% and 50% of the voting rights. Transactions with other related parties include transactions with the power generation / procurement companies Officine idroelettriche della Maggia SA, Officine idroelettriche di Blenio SA, Verzasca SA, Ritom SA held by the Canton Ticino as well as Kraftwerke Mattmark AG, AKEB Aktiengesellschaft für Kernenergie-Beteiligungen Luzern and Trianel Kohlekraftwerk Lünen GmbH & Co. KG held by AET for less than 20%. AET oftakes the respective share of energy and pays the related production / procurement costs.

2. Tangible fixed assets

| | Plants and equipment | Land and buildings | Tangible fixed assets under construction | Other tangible fixed assets | Total |
|---|-------------------------|-----------------------|--|-----------------------------------|-----------------|
| In CHF 1,000 | | | | | |
| Cost value at 01.01.2018 | 486,719 | 59,620 | 33,907 | 7,454 | 587,700 |
| Reclassification | 15,313 | 1,088 | -17,074 | 673 | - |
| Additions | 7,473 | - | 8,724 | 69 | 16,266 |
| Disposals | -47 | -633 | - | -180 | -860 |
| Cost value at 31.12.2018 | 509,458 | 60,075 | 25,557 | 8,016 | 603,106 |
| Reclassification | 14,273 | 498 | -16,371 | 1,600 | - |
| Additions | 945 | 174 | 7,331 | 251 | 8,701 |
| Disposals | -2,644 | 0 | -171 | -341 | -3,156 |
| Cost value at 31.12.2019 | 522,032 | 60,747 | 16,346 | 9,526 | 608,651 |
| Accumulated depreciation at 01.01.2018 | -284,899 | -9,930 | - | -6,264 | -301,093 |
| Reclassification | 364 | - | - | -364 | - |
| Depreciation | -12,560 | -881 | - | -412 | -13,853 |
| Additions | -4,028 | - | - | - | -4,028 |
| Disposals | 9 | 553 | - | 180 | 742 |
| Accumulated depreciation at 31.12.2018 | -301,114 | -10,258 | - | -6,860 | -318,232 |
| Reclassification | - | - | - | - | - |
| Depreciation | -12,355 | -907 | - | -400 | -13,662 |
| Additions | -316 | - | - | - | -316 |
| Disposals | 2,205 | - | - | 341 | 2,546 |
| Accumulated depreciation at 31.12.2019 | -311,580 | -11,165 | - | -6,919 | -329,664 |
| Net carrying amount at 01.01.2018 | 201,820 | 49,690 | 33,907 | 1,190 | 286,607 |
| Net carrying amount at 31.12.2018 | 208,344 | 49,817 | 25,557 | 1,156 | 284,874 |
| Net carrying amount at 31.12.2019 | 210,452 | 49,582 | 16,346 | 2,607 | 278,987 |

3. Participations

| | 31.12.2019 | 31.12.2018 |
|---|---------------|---------------|
| In CHF 1,000 | | |
| Società Elettrica Sopracenerina SA (SES) | 21,052 | 21,052 |
| Metanord SA | 11,505 | 11,505 |
| ./ impairment | -11,505 | -11,505 |
| SPE Società per Partecipazioni Energetiche SA | 8,000 | 8,000 |
| ./ impairment | -8,000 | -8,000 |
| Parco eolico del San Gottardo SA | 7,861 | 2,868 |
| Lucendro SA | 6,801 | 7,051 |
| TERIS Teleriscaldamento del Bellinzonese SA | 6,000 | 6,000 |
| Senco Holding SA | 1,149 | 1,149 |
| Calore SA | 1,000 | 1,000 |
| Capriasca Calore SA | 438 | 70 |
| Total | 44,301 | 39,190 |

The shares in Metanord SA are pledged in favour of creditors of the company, the impairment has been determined on the basis of the present value of expected cash flows.

The participation into Lucendro SA is amortised on a straight-line basis to the equity value expected at expiration of the concession.

4. Long-term securities

| | 31.12.2019 | 31.12.2018 |
|--|---------------|---------------|
| In CHF 1,000 | | |
| Trianel Kohlekraftwerk Lünen GmbH & Co. KG | 13,215 | 14,067 |
| Swissgrid AG | 12,589 | 12,589 |
| Kraftwerke Mattmark AG | 11,331 | 11,488 |
| AKEB Aktiengesellschaft für Kernenergie-Beteiligungen Luzern | 6,300 | 6,300 |
| Terravent AG | 2,250 | 2,250 |
| Other | 0 | 25 |
| Total | 45,685 | 46,719 |

The participation into Trianel Kohlekraftwerk Lünen GmbH & Co. KG is amortised on a straight-line basis according to the duration of the power purchase agreement in force.

The investment into Kraftwerke Mattmark AG is amortised on a straight-line basis to the equity value expected at expiration of the concession.

5. Advances and loans to participations

| | 31.12.2019 | 31.12.2018 |
|---|---------------|---------------|
| In CHF 1,000 | | |
| SPE Società per Partecipazioni Energetiche SA | 15,377 | 36,632 |
| ./. impairment | -10,941 | -11,342 |
| Terravent AG | 11,604 | 11,925 |
| Metanord SA | 8,200 | 8,200 |
| Lucendro SA | 4,900 | 3,000 |
| TERIS Teleriscaldamento del Bellinzonese SA | 4,000 | 4,000 |
| Parco eolico del San Gottardo SA | 3,904 | 1,140 |
| Other | 150 | 150 |
| Total | 37,194 | 53,705 |

The advance to SPE Società per Partecipazioni Energetiche SA (SPE) is subordinated for an amount of CHF 15 million and has been impaired because of the deterioration of the financial and economic conditions of the participations held by SPE.

The advances to Terravent AG and Metanord SA are entirely subordinated.

6. Intangible assets

| | Usage rights | Energy procurement rights | Intangible assets under development | Other intangible assets | Total |
|---|---------------|---------------------------|-------------------------------------|-------------------------|-----------------|
| In CHF 1,000 | | | | | |
| Cost value at 01.01.2018 | 15,124 | 144,555 | 1,077 | 9,307 | 170,063 |
| Reclassification | – | – | –210 | 210 | – |
| Additions | 647 | – | 365 | – | 1,012 |
| Disposals | –185 | – | – | – | –185 |
| Cost value at 31.12.2018 | 15,586 | 144,555 | 1,232 | 9,517 | 170,890 |
| Reclassification | – | – | –176 | 176 | – |
| Additions | – | – | 623 | – | 623 |
| Disposals | – | – | – | –68 | –68 |
| Cost value at 31.12.2019 | 15,586 | 144,555 | 1,679 | 9,625 | 171,445 |
| Accumulated amortisation at 01.01.2018 | –7,601 | –135,557 | – | –8,064 | –151,222 |
| Reclassification | – | – | – | – | – |
| Amortisation | –277 | –900 | – | –444 | –1,621 |
| Additions | –63 | – | – | – | –63 |
| Disposals | 185 | – | – | – | 185 |
| Impairments | – | 8,500 | – | – | 8,500 |
| Accumulated amortisation at 31.12.2018 | –7,756 | –127,957 | – | –8,508 | –144,221 |
| Reclassification | – | – | – | – | – |
| Amortisation | –221 | –1,844 | – | –414 | –2,479 |
| Additions | – | – | – | – | – |
| Disposals | – | – | – | 68 | 68 |
| Impairments | – | –8,500 | – | – | –8,500 |
| Accumulated amortisation at 31.12.2019 | –7,977 | –138,301 | – | –8,854 | –155,132 |
| Net carrying amount at 01.01.2018 | 7,523 | 8,998 | 1,077 | 1,243 | 18,841 |
| Net carrying amount at 31.12.2018 | 7,830 | 16,598 | 1,232 | 1,009 | 26,669 |
| Net carrying amount at 31.12.2019 | 7,609 | 6,254 | 1,679 | 771 | 16,313 |

Usage rights include rights for utilisation of third party plants, in particular related to exclusive usage of third party power grid plants, as well as concession fees paid in respect of hydro power concessions.

The energy procurement rights mainly refer to an energy procurement contract with EDF (expiration 31.12.2027); it has been impaired due to the prevailing market conditions. In 2019 an increase of the impairment has been made necessary by the development of the expected market parameters.

7. Other short-term assets

| | 31.12.2019 | 31.12.2018 |
|--|---------------|---------------|
| In CHF 1,000 | | |
| Other short-term receivables from subsidiaries | 272 | – |
| Other short-term receivables from associates | 89 | – |
| Other short-term receivables from other related parties | 729 | 4,635 |
| Other short-term receivables from third parties | 8,990 | 10,879 |
| Positive replacement values of transactions valued at market value | 25,752 | 35,305 |
| Energy related and similar certificates | 4,068 | 4,619 |
| Inventories of spare parts and consumables | 3,122 | 1,866 |
| Total | 43,022 | 57,304 |

8. Prepayments and accrued income

| | 31.12.2019 | 31.12.2018 |
|-----------------------|----------------|---------------|
| In CHF 1,000 | | |
| Subsidiaries | 1,106 | 3,844 |
| Associates | 4,378 | 4,135 |
| Other related parties | 8,431 | 9,788 |
| Third parties | 94,111 | 79,160 |
| Work in progress | 1,388 | 1,269 |
| Total | 109,414 | 98,196 |

The balance includes amounts in foreign currency for EUR 63.1 million (EUR 58.1 million at 31.12.2018).

Accrued income mainly includes the value of energy sold during the last reporting month and not yet invoiced.

9. Receivables from goods and services

| | 31.12.2019 | 31.12.2018 |
|-----------------------|---------------|---------------|
| In CHF 1,000 | | |
| Subsidiaries | 1,879 | 2,434 |
| Associates | 4,265 | 4,044 |
| Other related parties | 319 | 538 |
| Third parties | 9,312 | 7,511 |
| Total | 15,775 | 14,527 |

The balance includes amounts in foreign currency for EUR 2.4 million (EUR 1.1 million at 31.12.2018).

10. Cash and cash equivalents

| | 31.12.2019 | 31.12.2018 |
|--------------------------------|---------------|---------------|
| In CHF 1,000 | | |
| Balances in CHF | 71,330 | 45,537 |
| Balances in foreign currencies | 5,973 | 13,928 |
| Total | 77,303 | 59,465 |

11. Provisions

| | Energy onerous contracts | Personnel related expenses | Other | Total |
|--------------------------------------|--------------------------|----------------------------|--------------|---------------|
| In CHF 1,000 | | | | |
| Carrying amount at 01.01.2018 | 10,353 | 2,362 | 1,422 | 14,137 |
| <i>thereof long-term</i> | 9,396 | – | – | 9,396 |
| <i>thereof short-term</i> | 957 | 2,362 | 1,422 | 4,741 |
| Reclassification | – | – | – | – |
| Increase | 2,648 | 29 | 320 | 2,997 |
| Utilisation | –957 | –202 | –634 | –1,793 |
| Release | – | –37 | –500 | –537 |
| Carrying amount at 31.12.2018 | 12,044 | 2,152 | 608 | 14,804 |
| <i>thereof long-term</i> | 11,437 | – | – | 11,437 |
| <i>thereof short-term</i> | 607 | 2,152 | 608 | 3,367 |
| Reclassification | – | – | – | – |
| Increase | – | 1,346 | 40 | 1,386 |
| Utilisation | –607 | – | – | –607 |
| Release | –433 | –34 | –448 | –915 |
| Carrying amount at 31.12.2019 | 11,004 | 3,464 | 200 | 14,668 |
| <i>thereof long-term</i> | 10,294 | – | – | 10,294 |
| <i>thereof short-term</i> | 710 | 3,464 | 200 | 4,374 |

Provisions for energy onerous contracts include the negative present value of an energy purchase agreement with the Azienda Cantonale dei Rifiuti. The provision is determined according to the current energy price expectations for the contract period (2030) and the current EUR/CHF exchange rate.

The provision for personnel related expenses represents the value of overtime worked and not-taken holidays.

12. Long-term financial liabilities

| | 31.12.2019 | 31.12.2018 |
|--|----------------|----------------|
| In CHF 1,000 | | |
| Liabilities due between 1 and 5 years | 83,000 | 73,000 |
| Liabilities due between 5 and 10 years | 103,000 | 93,000 |
| Liabilities due after 10 years | 80,000 | 100,000 |
| Total | 266,000 | 266,000 |

13. Other short-term liabilities

| | 31.12.2019 | 31.12.2018 |
|--|---------------|---------------|
| In CHF 1,000 | | |
| Other short-term liabilities towards subsidiaries | 150 | – |
| Other short-term liabilities towards associates | 64 | 86 |
| Other short-term liabilities towards other related parties | 3,013 | 0 |
| Other short-term liabilities towards third parties | 6,893 | 8,507 |
| Negative replacement values of transactions valued at market value | 15,474 | 33,264 |
| Total | 25,594 | 41,857 |

14. Short-term financial liabilities

| | 31.12.2019 | 31.12.2018 |
|---|--------------|--------------|
| In CHF 1,000 | | |
| Financial liabilities in CHF | – | – |
| Financial liabilities in foreign currency | 2,174 | 6,761 |
| Total | 2,174 | 6,761 |

15. Accrued liabilities and deferred income

| | 31.12.2019 | 31.12.2018 |
|-----------------------|---------------|---------------|
| In CHF 1,000 | | |
| Subsidiaries | 1,016 | 842 |
| Associates | 4 | 109 |
| Other related parties | 1,434 | 4,467 |
| Third parties | 82,283 | 72,369 |
| Total | 84,737 | 77,787 |

The balance includes amounts in foreign currency for EUR 57.4 million (EUR 53.0 million at 31.12.2018).

Accrued liabilities mainly includes the value of energy purchased during the last reporting month and not yet invoiced.

16. Payables from goods and services

| | 31.12.2019 | 31.12.2018 |
|-----------------------|---------------|---------------|
| In CHF 1,000 | | |
| Subsidiaries | 1,826 | 1,984 |
| Associates | 324 | 7 |
| Other related parties | 3,373 | 3,595 |
| Third parties | 9,056 | 5,628 |
| Total | 14,579 | 11,214 |

The balance includes amounts in foreign currency for EUR 7.3 million (EUR 3.6 million at 31.12.2018).

17. Energy income

| | 2019 | 2018 |
|-----------------------------|----------------|----------------|
| In CHF 1,000 | | |
| Energy sales in Switzerland | 353,410 | 287,679 |
| Energy sales in Italy | 51,424 | 53,095 |
| Energy sales in Germany | 431,267 | 336,459 |
| Energy sales in France | 98,059 | 100,191 |
| Other energy income | 25,103 | 28,665 |
| Total | 959,263 | 806,089 |

The item other energy income includes the economic effect of the mark to market valuation of energy and CO₂ emission rights forward transactions acquired within the trading portfolio.

18. Other operating income

| | 2019 | 2018 |
|----------------------|---------------|---------------|
| In CHF 1,000 | | |
| Income from services | 12,215 | 12,792 |
| Own work capitalised | 3,607 | 3,468 |
| Other | 3,965 | 3,965 |
| Total | 19,787 | 20,225 |

19. Energy purchases

| | 2019 | 2018 |
|---------------------------------|-----------------|-----------------|
| In CHF 1,000 | | |
| Purchases from participations | -89,145 | -101,106 |
| Long-term contractual purchases | -33,473 | -33,340 |
| Purchases on the market | -793,092 | -656,556 |
| Total | -915,710 | -791,002 |

The expenses related to the energy offtaken from the production participations held by the Canton Ticino (Officine idroelettriche della Maggia SA, Officine idroelettriche di Blenio SA and Verzasca SA) are included within purchases from participations.

20. Personnel expenses

| | 2019 | 2018 |
|-------------------------------------|----------------|----------------|
| In CHF 1,000 | | |
| Salaries and other compensation | -24,691 | -22,610 |
| Social contributions | -5,338 | -5,108 |
| Other expenses | -641 | -492 |
| Recoveries from insurance companies | 213 | 243 |
| Total | -30,457 | -27,967 |

Employees of the company

| | 31.12.2019 | 31.12.2018 |
|----------------------|--------------|--------------|
| Full time equivalent | | |
| Permanent employees | 227.3 | 220.5 |
| Auxiliary employees | 9.7 | 7.7 |
| Apprentices | 31.0 | 30.0 |
| Total | 268.0 | 258.2 |

In 2019 the total compensation of the six executive committee members has been of CHF 1.5 million (gross of the legal contributions).

21. Other operating expenses

| | 2019 | 2018 |
|-------------------------------------|----------------|----------------|
| In CHF 1,000 | | |
| Water fees | -12,494 | -12,494 |
| Local taxes and other contributions | -3,656 | -3,493 |
| Other | -4,901 | -5,180 |
| Total | -21,051 | -21,167 |

Other contributions include the payment of accumulation contributions to power plants upstream to AET's plants for CHF 1.2 million.

22. Financial result

| | 2019 | 2018 |
|-----------------------------------|---------------|---------------|
| In CHF 1,000 | | |
| Interest income | 641 | 294 |
| Income from participations | 2,348 | 2,194 |
| Exchange rate differences | 689 | 367 |
| Interest payments and commissions | -6,134 | -6,130 |
| Other financial expenses | -109 | -60 |
| Total | -2,565 | -3,335 |

Exchange rate differences include the cost of foreign exchange currency hedging operations.

23. Extraordinary result

| | 2019 | 2018 |
|---|---------------|--------------|
| In CHF 1,000 | | |
| Release of provisions | 566 | – |
| Reversal of impairments on non-current assets | – | 8,500 |
| Profit from disposal of non-current assets | – | 671 |
| Other extraordinary income | 457 | 9,361 |
| Impairments of non-current assets | –8,500 | –7,927 |
| Increase of provisions | – | –2,648 |
| Other extraordinary expenses | –271 | – |
| Total | –7,748 | 7,957 |

The impairments increase relates to the energy procurement contract with EDF, whose value has been reassessed because of the deteriorated economic expectations for the upcoming years.

24. Contingent liabilities

| | 31.12.2019 | 31.12.2018 |
|--------------------------------|---------------|---------------|
| In CHF 1,000 | | |
| Guarantees in the interest of: | | |
| Subsidiaries | 22,935 | 23,919 |
| Associates | – | – |
| Third parties | 14,023 | 14,538 |
| Total | 36,958 | 38,457 |

Guarantees are issued as security of financing facilities granted to group companies or as security for operating commitments. Guarantees issued in the interest of third parties are related to the financing of disposed plants for which coverage AET obtained respective pledges or guarantees.

25. Other non-recognisable commitments

In the context of the management of its energy portfolio, AET has entered into transactions on the futures markets and finalised various long-term energy purchase agreements involving irrevocable obligations.

Energy purchase contracts and market operations

| | Market transactions | Long-term contracts |
|--------------------------------|---------------------|---------------------|
| Cumulative volume in CHF 1,000 | | |
| 2020 | 565,003 | 34,926 |
| from 2 to 5 years | 285,760 | 141,439 |
| over 5 years | – | 121,616 |

AET further has an offtake commitment for the energy produced by its own power generation participations and the participations of the Canton Ticino, paying its production cost quota. The duration of these obligations is undetermined and depends on the future developments of those participations.

AET also has entered into a cross-border interconnection capacity agreement with expiration 2022 and with an annual volume of CHF 3.6 million (value of the indexed contact based on 2019 prices and year-end exchange rate).

Forward currency operations

| 31.12.2019 | Maturity year 2020 | | Maturity year 2021 | |
|------------|-------------------------------|--------------------------------------|-------------------------------|--------------------------------------|
| | Amount in currency (in 1,000) | Average exchange rate (currency/CHF) | Amount in currency (in 1,000) | Average exchange rate (currency/CHF) |
| Operation | | | | |
| Sell EUR | 17,000 | 1.11 | – | – |

| 31.12.2018 | Maturity year 2019 | | Maturity year 2020 | |
|------------|-------------------------------|--------------------------------------|-------------------------------|--------------------------------------|
| | Amount in currency (in 1,000) | Average exchange rate (currency/CHF) | Amount in currency (in 1,000) | Average exchange rate (currency/CHF) |
| Operation | | | | |
| Sell EUR | 36,000 | 1.14 | – | – |

Forward foreign currency transactions have been entered into with the purpose of hedging expected future foreign currency cash flows.

At 31.12.2019 AET has no off-balance sheet lease commitments (31.12.2018: unchanged).

26. Pension benefit obligations

| | Coverage rate | Economic benefit/ economic obligations for the company | Change recognised in the income statement | Expense for contributions of the period | Pension benefit expense within personnel expenses |
|---|---------------|---|---|---|---|
| CPE Fondazione di Previdenza Energia | | | | | |
| In CHF 1,000 | | | | | |
| 31.12.2019 | 109.2% | – | – | –2,477 | –2,477 |
| 31.12.2018 | 104.4% | – | – | –2,334 | –2,334 |

Starting from 01.04.2017 the Fondo Pensionamento Anticipato dell’AET only covers “OASI bridge-benefits”, all other coverages previously granted have been integrated within the CPE Fondazione di Previdenza Energia pension scheme.

27. Transactions with related parties

Transactions with subsidiaries

| | 2019 | 2018 |
|----------------------------|--------|--------|
| In CHF 1,000 | | |
| Energy income | 10,400 | 9,068 |
| Service and other income | 4,017 | 2,818 |
| Financial income | 816 | 655 |
| Energy purchases | 21,197 | 19,657 |
| Service and other expenses | 32 | 11 |

Transactions with associates

| | 2019 | 2018 |
|----------------------------|--------|--------|
| In CHF 1,000 | | |
| Energy income | 27,131 | 24,423 |
| Service and other income | 15,806 | 17,095 |
| Financial income | 644 | 644 |
| Energy purchases | 17 | 28 |
| Service and other expenses | 1,981 | 2,351 |

Transactions with other related parties

| | 2019 | 2018 |
|----------------------------|--------|--------|
| In CHF 1,000 | | |
| Energy income | 927 | 1,212 |
| Service and other income | 2,050 | 2,105 |
| Financial income | 694 | 512 |
| Energy purchases | 81,880 | 94,566 |
| Service and other expenses | 2,201 | 2,153 |

28. Risk assessment

The Board of Directors and Management give the utmost attention and deploy the necessary resources for the valuation and management of risks in order to adhere to the standards of the sector. The management and valuation of the company's risks have been integrated into the company's operating procedures, in order to guarantee the maximum effectiveness.

From a financial point of view AET is exposed to following main risk factors:

Volume risk: is the risk associated with the variation in the sales volume, respectively of production volumes compared to forecasts. Its principal cause is the meteorological risk in that the meteorological deviations from the long-term averages cause variations in consumption and production from the hydroelectric plants that are difficult to predict. In the long-term AET manages this risk by diversifying its supplies with long-term contracts and participations. In the medium to short-term this risk is managed with a gradual rebalancing of the portfolio using updated forecasts and historical data. In addition AET can count on reserve capacity from its own hydroelectric plants.

Market risk: is the risk associated with the variations in the price of energy on the markets and the fluctuation of exchange rates. AET manages this risk by monitoring the evolutions and the expectations of market prices and consequently hedges the positions. The foreign exchange risk is managed through hedging operations. Market risks mostly have an effect on the quantity of energy sold and produced resulting from the volume risk that can not be efficiently hedged in advance because unknown.

Counterparty risk: is the risk of loss related to payment default of commercial counterparties. Sales are mainly made to large Swiss and bordering countries power companies. Exposure limits are determined for each counterparty, based on their economic and financial situation. Counterparty risk related to the Swiss commercial / distribution activity is managed through the constant monitoring of the receivable positions, the subscription of receivables insurances, the request of bank guarantees or deposits.

Regulatory risk: relates to the introduction or modification of laws, acts or rules at Swiss or European level, which might have an impact on the activity of AET. AET constantly monitors the regulatory developments, adopting the necessary adjustments.

29. Subsequent events

2019: on the 11.03.2020 the world health organisation has declared the coronavirus (COVID-19) outbreak pandemic, which has reached, among others, vast European territories. Switzerland and the Canton Ticino in particular have been strongly affected too. Like many other European governments, the Swiss government has declared the “extraordinary situation” and has imposed a lockdown, significantly restricting the economic and social activities. This caused sharp energy consumption reductions, which caused a major price reduction of all energy commodities. As of today, it’s not yet possible to quantify the economic and financial impact for AET, an impact is expected on the 2020 operating result, whereas no material impact is expected on the balance sheet positions.

2018: no significant event.

Audit report by KPMG SA on the financial statements



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Report of the Statutory Auditor to the Gran Consiglio of Repubblica e Cantone Ticino

Report of the Statutory Auditor on the Financial Statements

As statutory auditor, we have audited the accompanying financial statements (from page 59 to page 81) of Azienda elettrica ticinese, which comprise the balance sheet, income statement, cash flow statement, statement of changes in equity and notes for the year ended on December 31, 2019.

Board of Directors' Responsibility

The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss GAAP FER, the requirements of Swiss law and Act of Azienda elettrica ticinese. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law, Swiss Auditing Standards and Act of Azienda elettrica ticinese. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements for the year ended on December 31, 2019 give a true and fair view of the financial position, the results of operations and the cash flows in accordance with Swiss GAAP FER and comply with Swiss law and Act of the Azienda elettrica ticinese.



*Azienda elettrica ticinese, Bellinzona
Report of the Statutory Auditor
on the Financial Statements
to the Gran Consiglio of Repubblica e Cantone Ticino*

Report on Other Legal Requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We recommend that the financial statements submitted to you be approved.

KPMG SA

A handwritten signature in black ink on a light blue dotted background. The signature is 'Orlando Lanfranchi'. A small red circular stamp with a white cross is visible in the top right corner of the signature area.

Orlando Lanfranchi
*Licensed Audit Expert
Auditor in Charge*

A handwritten signature in black ink on a light blue dotted background. The signature is 'Mathias Marzorati'. A small red circular stamp with a white cross is visible in the top right corner of the signature area.

Mathias Marzorati
Licensed Audit Expert

Lugano, April 21, 2020



The staff of AET Grid is constantly engaged on numerous construction sites throughout the Canton.





The complexity of the construction of power lines often requires the use of means to reach hardly accessible sites.

AET Group companies

| | Value | Nominal equity at 31.12.2019 In 1,000 | Participation at 31.12.2019 % | Participation at 31.12.2018 % |
|--|-------|---|-------------------------------------|-------------------------------------|
| AKEB Aktiengesellschaft für Kernenergie – Beteiligungen Luzern (AKEB), CH-Luzern <i>Nuclear energy participations and offtake rights</i> | CHF | 90,000 | 7.00 | 7.00 |
| Calore SA, CH-Locarno <i>Thermal energy</i> | CHF | 2,000 | 65.00 | 65.00 |
| Biomassa Blenio SA, CH-Blenio <i>Biomass thermal energy</i> | CHF | 870 | – ¹ | 22.41 |
| Capriasca Calore SA, CH-Capriasca <i>Development of a thermal plant</i> | CHF | 1,313 | 33.33 | 33.33 |
| Geo-Energie Suisse AG, CH-Zürich <i>Development of geothermal power</i> | CHF | 2,150 | 4.65 | 5.26 |
| Kraftwerke Mattmark AG (KW Mattmark), CH-Saas Grund <i>Sub-participation through Axpo Trading AG. Hydroelectric power generation</i> | CHF | 90,000 | 8.41 | 8.41 |
| Lucendro SA, CH-Airolo <i>Hydroelectric power generation</i> | CHF | 3,000 | 100.00 | 100.00 |
| Metanord SA, CH-Bellinzona <i>Gas distribution</i> | CHF | 18,000 | 33.33 | 33.33 |
| Parco eolico del San Gottardo SA (PESG), CH-Airolo <i>Wind power, development and construction of a windpark on St. Gotthard</i> | CHF | 6,000 | 70.00 | 70.00 |
| Senco Holding SA, CH-Locarno <i>Holding participation into hydroelectric power generation (micro power plants)</i> | CHF | 150 | 65.00 | 65.00 |
| CEL Bedretto SA, CH-Bedretto <i>Hydroelectric power generation</i> | CHF | 200 | 13.00 | 13.00 |
| CEL Buseno SA, CH-Buseno <i>Development of a hydroelectric power plant</i> | CHF | 100 | 13.00 | 13.00 |
| CEL Campo Vallemaggia SA, CH-Campo Vallemaggia <i>Hydroelectric power generation</i> | CHF | 400 | 14.30 | 14.30 |
| CEL Cauco SA, CH-Cauco <i>Development of a hydroelectric power plant</i> | CHF | 100 | 13.00 | 13.00 |
| CEL Cerentino SA, CH-Cerentino <i>Hydroelectric power generation</i> | CHF | 200 | 13.00 | 13.00 |
| CEL Dalpe SA, CH-Dalpe <i>Hydroelectric power generation</i> | CHF | 200 | 11.70 | 11.70 |
| CEL Lavizzara SA, CH-Lavizzara <i>Hydroelectric power generation</i> | CHF | 200 | 13.00 | 13.00 |
| Senco Sagl, CH-Locarno <i>Services in favour of hydroelectric power plants promoted by Senco Holding SA</i> | CHF | 220 | 65.00 | 65.00 |

¹ sold in 2019

| | Value | Nominal equity at 31.12.2019 In 1,000 | Participation at 31.12.2019 % | Participation at 31.12.2018 % |
|--|-------|--|----------------------------------|----------------------------------|
| Società Elettrica Sopracenerina SA (SES) , CH-Locarno <i>Power distribution company</i> | CHF | 16,500 | 30.00 | 30.00 |
| Energie Rinnovabili Losone (ERL) SA , CH-Losone <i>Biomass thermal energy</i> | CHF | 2,700 | 10.00 | 10.00 |
| Enerti SA , CH-Monteceneri <i>Service company</i> | CHF | 200 | 9.92 | 9.92 |
| SES Controlli Sagl , CH-Locarno <i>Service company</i> | CHF | 20 | 30.00 | 12.00 |
| SES Collaudi Sagl , CH-Locarno <i>Service company</i> | CHF | 20 | 24.00 | – |
| Società della Funicolare Locarno - Madonna del Sasso SA (FLMS) , CH-Locarno <i>Ownership and operation of a funicular</i> | CHF | 900 | 4.09 | 4.09 |
| Società Locarnese di Partecipazioni e Immobiliare SA (SAP SA) , CH-Locarno <i>Real estate company</i> | CHF | 2,064 | 29.99 | 29.99 |
| SPE Società per Partecipazioni Energetiche SA (SPE) , CH-Bellinzona <i>Holding company</i> | CHF | 8,000 | 100.00 | 100.00 |
| AET Italia Srl , I-Milan <i>Trading of cross-border interconnection capacity</i> | EUR | 871 | 100.00 | 100.00 |
| CEG Srl , I-Milan <i>Holding and services</i> | EUR | 120 | 100.00 | 100.00 |
| Nord Energia SpA , I-Milan <i>Management of cross-border interconnection power line (Merchant Line)</i> | EUR | 10,200 | 40.00 | 40.00 |
| CMC MeSta SA , CH-Bellinzona <i>Detention of Mendrisio – Stabio cross-border power line</i> | CHF | 6,000 | 40.00 | 40.00 |
| Swissgrid AG , CH-Aarau <i>Swiss transmission system operator</i> | CHF | 320,398 | 1.66 | 1.67 |
| TERIS Teleriscaldamento del Bellinzonese SA (TERIS) , CH-Bellinzona <i>Thermal energy from waste</i> | CHF | 10,000 | 60.00 | 60.00 |
| Terravent AG , CH-Luzern <i>Wind power generation</i> | CHF | 16,830 | 13.37 | 14.06 |
| Trianel Kohlekraftwerk Lünen GmbH & Co. KG (TKL) , D-Aachen <i>Coal power generation, Lünen</i> | EUR | 147,944 | 15.84 | 15.84 |

Statistical informations

Production and purchases of AET Group

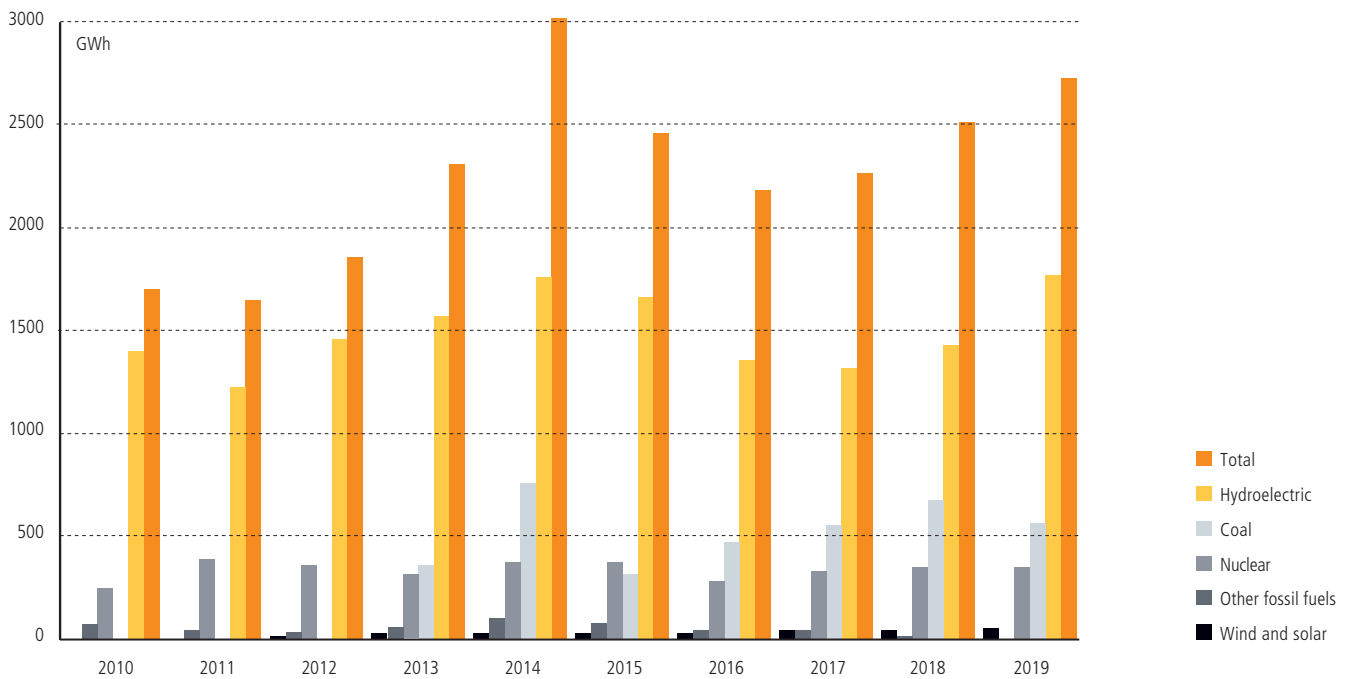
| | Winter | Summer | 2019 | 2018 |
|--|---------------|--------------|---------------|---------------|
| In GWh | | | | |
| Production AET Group | | | | |
| AET Biaschina | 196 | 280 | 476 | 414 |
| AET Piottino | 155 | 194 | 349 | 314 |
| Lucendro | 86 | 45 | 131 | 95 |
| AET Stalvedro | 28 | 38 | 66 | 57 |
| AET Ofima exchange | 12 | 31 | 43 | 42 |
| AET Ponte Brolla | 6 | 7 | 13 | 15 |
| AET Tremorgio | 2 | 6 | 8 | 3 |
| Biogen Chivasso (CEG Group) | – | – | – | 11 |
| Photovoltaic | 1 | 3 | 4 | 4 |
| Total production AET Group | 486 | 604 | 1,090 | 955 |
| Production participations (share attributable to AET Group) | | | | |
| Maggia | 158 | 157 | 315 | 190 |
| Blenio | 101 | 104 | 205 | 156 |
| Verzasca | 42 | 36 | 78 | 73 |
| KW Mattmark | 27 | 36 | 63 | 56 |
| Senco Group | 1 | 3 | 4 | 4 |
| SES Giumaglio | 3 | 4 | 7 | 7 |
| SES Ticineto | 1 | 2 | 3 | 2 |
| Terravent AG | 28 | 18 | 46 | 43 |
| AKEB | 191 | 145 | 336 | 341 |
| KK Leibstadt | 8 | 6 | 14 | 11 |
| Trianel TKL | 315 | 251 | 566 | 667 |
| Total production participations | 875 | 762 | 1,637 | 1,550 |
| Long-term contracts ¹ | 309 | 333 | 642 | 642 |
| Purchases on the market | 8,407 | 7,901 | 16,308 | 15,096 |
| Total | 10,077 | 9,600 | 19,677 | 18,243 |

¹ Delivery contractualised for more than 5 years

Supply of AET Group

| | Winter | Summer | 2019 | 2018 |
|---------------------------------|---------------|--------------|---------------|---------------|
| In GWh | | | | |
| Sales to distribution companies | 1,136 | 842 | 1,978 | 2,095 |
| Sales to end customers | 236 | 202 | 438 | 427 |
| Sales on the market | 8,687 | 8,547 | 17,234 | 15,657 |
| Own consumption and losses | 18 | 9 | 27 | 64 |
| Total | 10,077 | 9,600 | 19,677 | 18,243 |

Production AET Group and participations







Photos:

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Giacomo Mirarchi (pp. 6-57)

Nicola Demaldi (pp. 86, 92-93)

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