taesa

TECHNICAL NOTE

ACCOUNTING STANDARDS USED IN THE BRAZILIAN ENERGY TRANSMISSION SECTOR

Summary

Purpose

The purpose of this technical note is to explain the types of accounting standards used in Brazil's energy transmission sector, presenting their main differences and effects in the company's result and cash flow, through a direct, objective, practical and simple language, in order to assist investors and capital market analysts in understanding the sector and in the evaluation and pricing of assets such as Transmissora Aliança de Energia Elétrica S.A. ("TAESA" or "Company").

Introduction

There are two accounting methods used in the transmission sector in Brazil. One of them follows the accounting practices of the International Financial Reporting Standards (IFRS). This method will be treated throughout the technical note as IFRS Accounting or Corporate Accounting, as is commonly known. The other method used follows the accounting standards of the Electricity Sector Accounting Manual of the Brazilian Electricity Regulatory Agency (ANEEL) (http://www2.aneel.gov.br/arquivos/PDF/MCSE_-_Revis%c3%a3o.pdf), which will be treated throughout this document as Regulatory Accounting.

Under IFRS Accounting, investments are recognized in the balance sheet as financial asset, pursuant to Resolution no. 1,261, dated December 10, 2009 (Federal Accounting Council). Thus, revenues under IFRS reflect the changes in the financial asset.

Under Regulatory Accounting, revenues represent in fact the cash inflows (the Annual Permitted Revenues, known as RAP); therefore, the Regulatory result reflects the company's cash flow. Moreover, investments are recognized in the balance sheet as fixed assets.

It is important to mention that, although Regulatory Accounting reflects the company's cash flow, the distribution of earnings to shareholders is based on IFRS financial statements, since the IFRS Accounting is the accounting method recognized by the tax authorities.

In addition of explaining the differences between each of the accounting methods described above, this document also aims to demonstrate how the 50% RAP cut of category 2 concessions will occur (the categories of concession contracts will be explained later in section 2 - Regulatory Accounting) and also how this drop in revenues should impact TAESA's results and the distribution of dividends for the coming years.

1. Corporate Accounting (IFRS)

From 2010 onwards, Brazil adopted the International Accounting Standards known as International Financial Reporting Standards (IFRS), based on Law 11,638/2007 sanctioned by the Brazilian Federal Government in the end of 2007, amending the 1976 Corporate Law. The new law determined that all Brazilian publicly listed companies must present their financial statements prepared in accordance with International Financial Reporting Standards - IFRS.

On November 6, 2009, the Accounting Pronouncements Committee, known as CPC, issued ICPC 01, a normative instruction that defines how to account for public service concessions to private entities. Such instruction is the strict translation of IFRIC 12 – instruction issued by the International Accounting Standards Board (IASB).

IFRIC 12 discusses about the accounting treatment for public-private partnership operators (concession services). Within the instruction scope, the private entity (operator) builds an infrastructure for the use of a public service and the maintenance and operation will be in charge of this entity during a certain period. The infrastructure built by the operator is not registered as its fixed asset because the concession contract does not transfer to the concessionaire the right of control (much less of ownership) of the use of the public services infrastructure; that is, the concessionaire obtains the right to operate the infrastructure for the provision of public services and is remunerated by the availability of this infrastructure. Through ICPC 01, the investments made by the company during the construction phase are recognized in the balance sheet as financial asset.

Following the convergence process of Brazilian accounting standards to international accounting, on December 22, 2009, through resolution no. 611, the CVM required the adoption of ICPC 01 for the years ended as of December 2010. Since then, the energy transmission sector started to use IFRS standards based on the IFRIC 12/ICPC 01 for the accounting of its business.

Changes in the Financial Asset

The basic rules for measurement and recognition of the accounts referring to the changes of the financial asset based on the IFRS standards are shown below.

a) Measurement and Recognition of the Financial Asset

Financial Asset – Recognition

The financial asset of the concessionaires is formed through the fair value of the construction services; in other words, the financial asset is the value of its future cash flows discounted to present value. The future cash flow is determined at the beginning of the concession and reassessed at the date that the transmission line starts to operate, to split the RAP in which portion will pay for the infrastructure and the portion that will pay for O&M services.

During the construction period, that is, the formation of the financial asset, this asset is remunerated by the Financial Asset Remuneration Rate (TRAF). After the asset starts its operations, in addition to the TRAF remuneration and the monetary restatement of the financial asset during the operational phase, this financial asset is amortized through the RAP inflows excluding the amount related to operation and maintenance revenues – as explained later on, these revenues are the portion of the RAP that remunerates the O&M services.

The TRAF represents the remuneration of the asset calculated so that the initial investment in the project is fully amortized after the cash flow for the entire concession period. It should be mentioned that the TRAF considers the real cash flow, that is, the Company does not consider projected inflation in the future cash flow.

Although slightly different concepts, market analysts use the term IRR in place of TRAF, and TAESA also uses it in some of its reports without prejudice to the understanding of the concept of remuneration of the financial asset.

Financial Asset – Indemnity

At the end of the construction, when the calculation of the indemnity becomes possible, the amount of the indemnity equivalent to the fixed asset not fully depreciated nor amortized by the concession end will become part of the cash flow of the financial asset, since it is part of the remuneration expected by the construction services.

As there is still pending regulation by ANEEL, if the criteria for indemnity of the reversible assets will be based on the book value or the new value of replacement (VNR), TAESA considers the indemnity amount to be the book value of the assets net of depreciation.

b) Measurement and Recognition of Construction Revenues

The Company recognizes revenues and costs associated with the development of infrastructure during the construction period, in accordance to CPC 47 - Construction Contracts. Such pronouncement requires that TAESA registers its revenues proportional to the construction stage.

When providing construction services, the Company recognizes operational revenues, called construction revenues, and a financial asset, formed by the construction costs added by PIS and COFINS taxes.

c) Measurement and Recognition of the Remuneration of the Financial Asset

The Company recognizes monthly the remuneration over the financial asset balance, in accordance to CPC 47.

TAESA calculates the remuneration considering the opening balance of the financial asset plus half of the construction revenues for that month (practice used by the Company to remunerate the investments made within that same month) and multiplied by the financial asset remuneration rate (TRAF).

d) Measurement and Recognition of the Monetary Restatement of the Financial Asset

TAESA currently recognizes the monetary restatement revenues monthly over the financial asset based on the inflation recorded in the previous month (IGP-M or IPCA, according to each concession agreement).

The revenues from the monetary restatement are calculated by the difference between the future inflows restated by the previous-month inflation and the future inflows without this restatement, both discounted to present value by the TRAF. It is important to reinforce that the future inflows consider the RAP of the current cycle restated by the accumulated inflation up to that month.

e) Measurement and Recognition of Operation and Maintenance Revenues

Revenues from O&M services should be determined based on their fair values and should be stable throughout the concession contract, being adjusted by inflation in July of each year following the same criteria for the RAP inflation adjustment of each concession.

In the beginning of the operation, the RAP portion that remunerates O&M is determined by the operation and maintenance costs added by administrative expenses plus the charges on the RAP.

Subsequently, these revenues are restated annually by the inflation index defined in the concession agreement.

Any CAPEX addition, after the construction period, with no linked revenues should be recorded as O&M cost, since this cost is not an investment that will generate a new RAP, and therefore, it cannot be part of the financial asset.

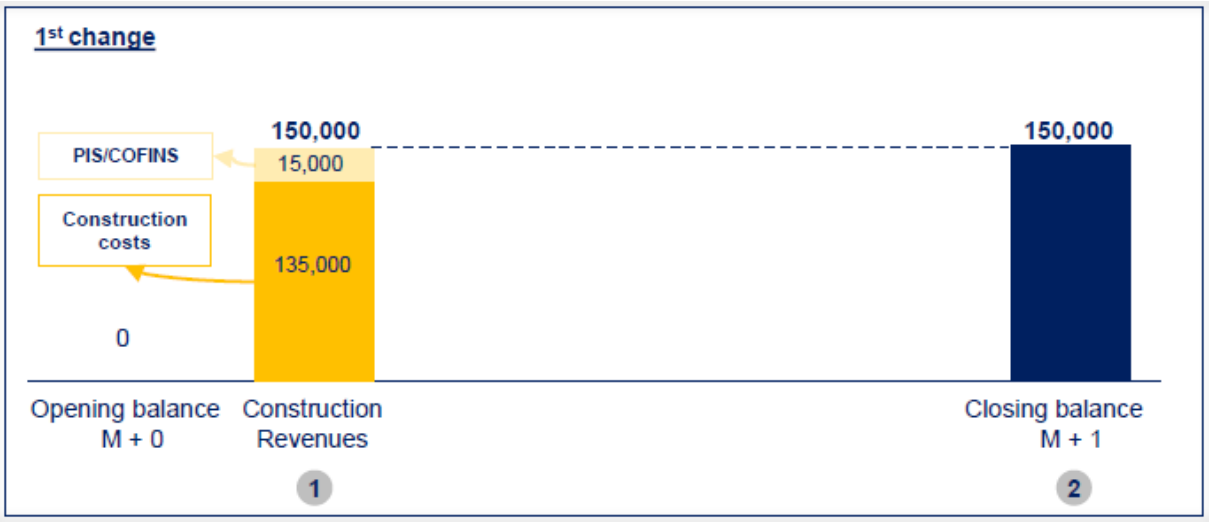
Exemplification – Changes in the Financial Asset

In order to facilitate the understanding of the IFRS Accounting, we show below an example based on the accounting of a single transmission concession with illustrative figures. The Company's IR website provides a PowerPoint presentation with this step-by-step example showing the changes in the financial asset:
http://ri.taesa.com.br/taesa2013/web/download_arquivos.asp?id_arquivo=CF2C86A8-633E-4DCD-9FDD-08538C1A2D71

a) Under Construction Period – Formation of the Financial Asset

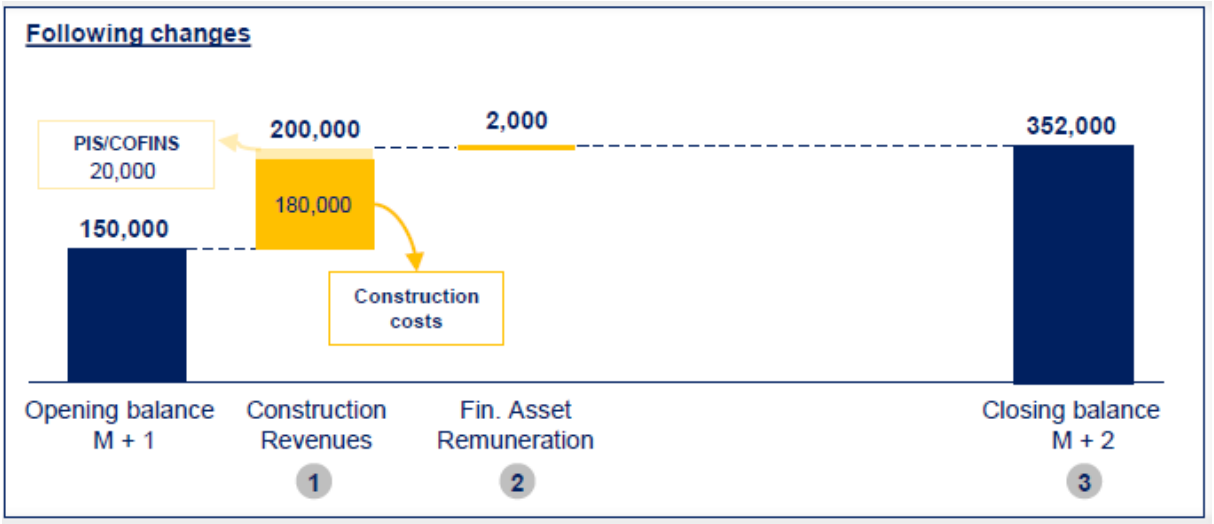
1º moment: Beginning of investments in construction

The formation of the Financial Asset occurs, in the first moment, through the construction revenues (1). During the construction period, construction revenues are determined by the construction costs incurred (investments) added by PIS/COFINS taxes. In this first moment, this is the only component affecting the Financial Asset (2).



Following changes: Formation of the Financial Asset from construction revenues and remuneration of the Financial Asset

The construction revenues are added monthly to the Financial Asset during the construction period (1). At this moment, the Financial Asset starts to be remunerated by the respective project's TRAF over the opening balance (2). In the under-construction period, the TRAF is an estimated rate based on the auction result and market variables, such as financing conditions. So, during the under-construction period, the Financial Asset is composed of the construction revenues and the project's remuneration (3).



b) Operational Period – Remuneration and monetary restatement of the Financial Asset, O&M revenues, and amortization by the RAP

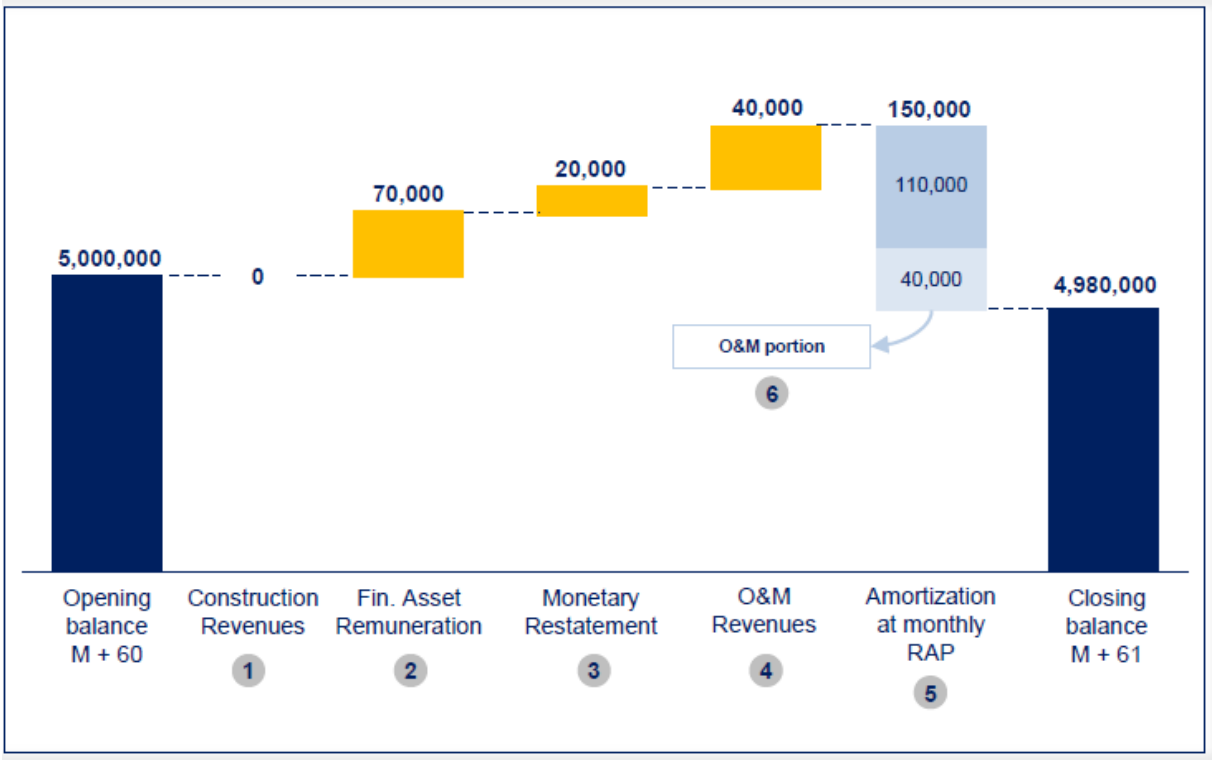
For obvious reasons, there are no construction revenues during the operational period (1). The Financial Asset continues to be remunerated by the TRAF, which is revised to reflect the project's actual free cash flow once it starts to operate (2).

In addition, after the concession starts its operation and starts to receive the RAP, the Financial Asset is monthly restated by an inflation rate (IGP-M or IPCA, according to each concession), calculated by the monetary restatement of future inflows discounted to present value (3). Once the concession starts to operate, the future inflows is equivalent to the RAP restated by the inflation accumulated from the beginning of the concession until the moment it starts operations. This line of monetary restatement of the financial asset that suffers the impact of the macroeconomic indexes.

O&M revenues are a portion of the RAP that remunerates the operation and maintenance of the concession assets (4). The amortization of the Financial Asset is done through the monthly RAP

(inflows), which is annually adjusted by inflation (5). Since the O&M is a portion of the RAP, these revenues do not influence the changes in the Financial Asset since it is offset by the amortization (RAP) (6).

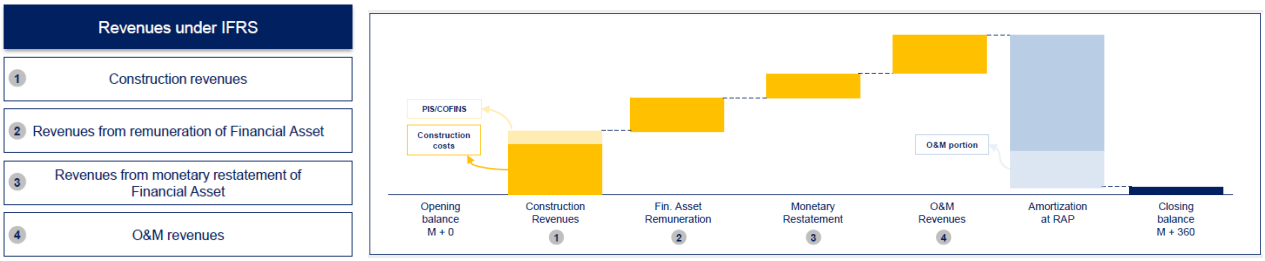
For accounting purposes, O&M revenues do not compose the financial asset, since it does not remunerate the initial investment. For this reason, the asset amortization is made by the RAP excluding O&M revenues as explained before. However, in order to facilitate the comprehension of the change of the financial asset, O&M revenues and RAP amortization, which includes O&M, are both considered in this example.



Impact of the changes in the financial asset on the IFRS results

As explained before, in accordance with IFRS accounting standards, the company must recognize the revenues to which it is entitled, from the changes in the financial asset during all concession term. Therefore, the operational revenues under IFRS are directly related to the changes in the financial asset.

Considering the entire concession period, that is, considering the changes of the financial asset since its construction (Opening Balance: M+0), through the operational phase and reaching the end of the concession period defined in the contract (Closing Balance: M+360), it is shown below a summary of the impact of the changes in the financial asset on the IFRS results.



1. Construction revenues are linked to the first component of the change of the financial asset as a consequence of the investments incurred and they only occur during the construction period of the concession. It is worth mentioning that construction revenues have practically no effect on the net income under IFRS, since it is offset by the construction costs.

2. Remuneration of the financial asset generates revenues under IFRS for the same amount.

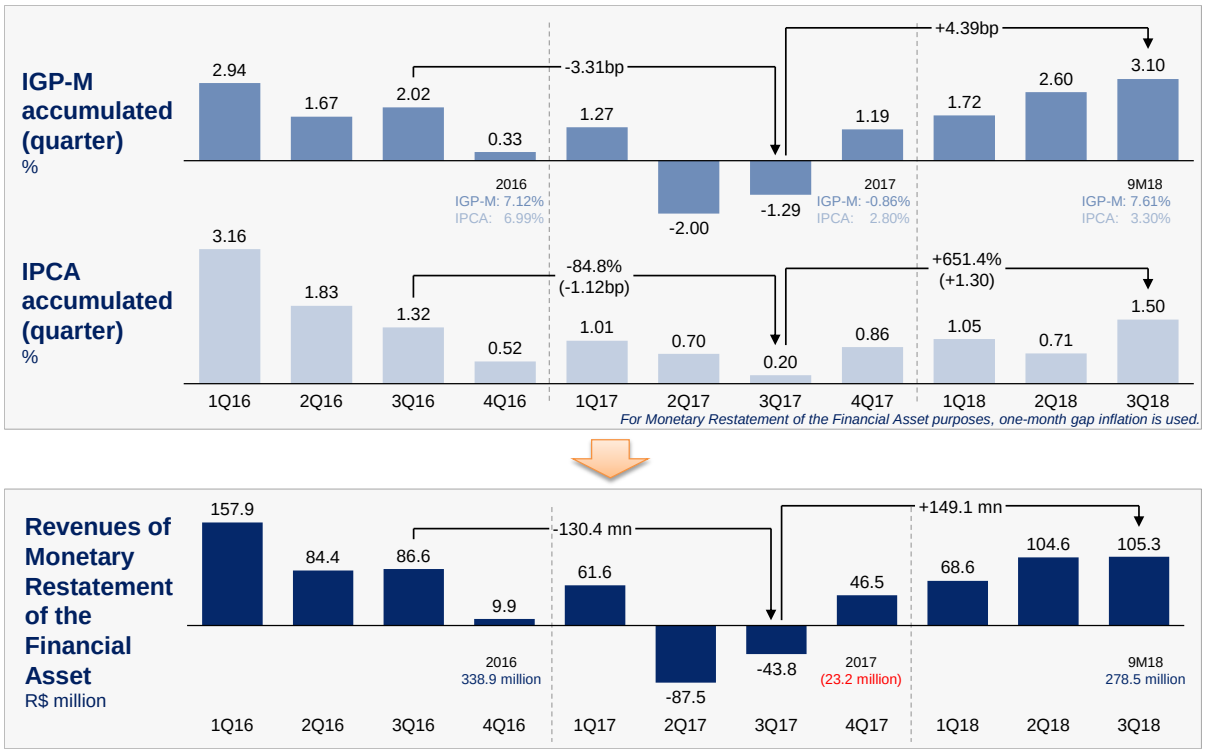
3. Monetary restatement of the financial asset generates revenues under IFRS for the same amount.

4. The RAP portion corresponding to operation and maintenance generates O&M revenues for the same amount, which are annually readjusted by the corresponding RAP inflation index.

Macroeconomic indexes effect on IFRS revenues

In the past years, TAESA's results under IFRS were significantly impacted by the macroeconomic indexes, mainly the IGP-M since its concessions are mostly adjusted by this inflation index. This means that any negative or positive variation in inflation, especially in IGP-M, significantly influences the monetary restatement of the financial asset, consequently affecting the Company's revenues under IFRS.

The following figure shows the relationship between the inflation rates (IGP-M and IPCA) registered in the years of 2016, 2017 and 2018, and the monetary restatement of the financial asset in the same period.

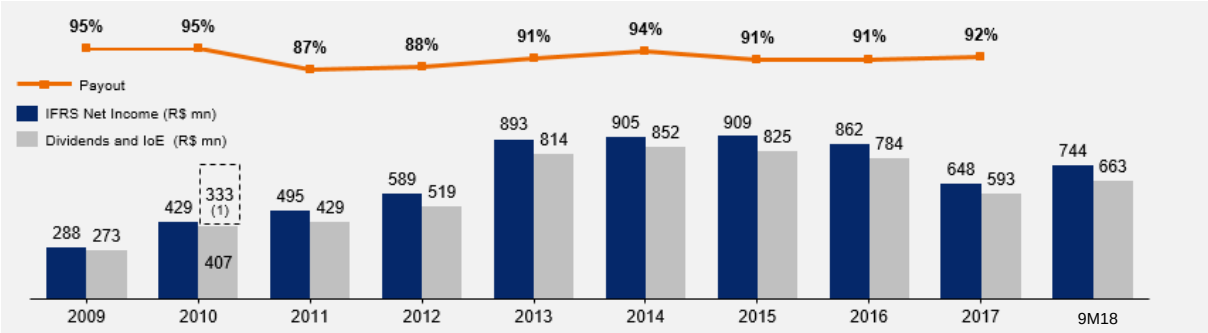


It is possible to observe that the revenues from the monetary restatement of the financial asset were negatively impacted in 2017, a year when inflation dropped, registering for instance a deflation of -0.86% in IGP-M. As a result, revenues from monetary restatement of the financial asset were R$ 23.2 million negative in 2017 versus R$ 338.9 million in 2016, an annual decrease of more than R$ 360 million. It is worth noting that this drop in IFRS revenues is only accounting and has no effect on regulatory revenues (non-cash).

On the other hand, with the inflation recovery from 4Q17, monetary restatement revenues followed this growth movement in 2018, reaching nearly the same levels of 2016, as shown in the figure above.

This way, the behavior of the macroeconomic indexes directly influences the IFRS result and consequently the distribution of dividends and interest on equity of the company, noting, as mentioned in the beginning, that the declaration of these proceeds is based on the net income under IFRS.

The table below shows the track record of the net income under IFRS, and dividends and interest on equity distributed to the Company's shareholders.



(1) The IFRS reserve was distributed as dividends. The reserve was recorded after the adoption of the IFRS accounting method in 2010.

It is worth mentioning here that, as observed in the graph above, TAESA has historically made the maximum distribution of dividends to its shareholders. That is, the Company's entire net income under IFRS, after the allocation of the legal reserve and tax incentive reserve, is distributed to shareholders as dividends and interest on equity, a term known as "*Payout*."

2. Regulatory Accounting

As mentioned in the beginning of this technical note, the Regulatory Accounting is prepared and elaborated based on the current Electricity Sector Accounting Manual, issued by ANEEL. In this method, all investments made in the construction of transmission lines and substations are recorded as fixed assets and the effects from the application of ICPC 01 and IFRIC 12 are eliminated, including fiscal taxes impacts (deferred corporate income social taxes and deferred PIS and COFINS) recognized over the differences arising from the application of this interpretation.

In addition, the operational revenues that concessionaires are entitled to receive is called Annual Permitted Revenues (RAP), guaranteed by the concession agreement and annually adjusted by inflation. As TAESA's business is energy transmission, its revenues are based exclusively on the availability of the transmission lines and substations of its concessions, so they do not depend on the volume of energy transmitted by its concessionaires. Therefore, the RAP is a fixed amount (adjusted by inflation) until the end of the concession, but it is subject to a discount for the unavailability of its lines and/or substations, known as Variable Portion (PV).

Therefore, the operational revenues correspond to the receivables that is, to the sum of the Annual Permitted Revenues of each concession discounted from the PV value recognized in the period. For this reason, the Regulatory Accounting, unlike the Corporate (IFRS), is the accounting method that best reflects the company's cash flow.

Concession Contract Categories

There are 3 categories of energy transmission concession in Brazil:

- Category 1: Refers to the concessions granted prior to 1999 that were renewed in 2012, for another 30 years, by Provisional Measure no. 579 of September 11, 2012. RAP is annually adjusted by IPCA (National Wide Consumer Price Index) since 2013 and is subject to tariff reviews every five years.
- Category 2: Concessions auctioned between 1999 and November 2006 with 30-year contracts. RAP is annually adjusted by IGP-M (General Index of Market Prices) and is reduced by 50% (Basic Network) in the 16th year of operation, and is not subject to tariff review.
- Category 3: Concessions auctioned after November 2006, also with 30-year contracts. RAP is annually adjusted by IPCA and is subject to tariff reviews in the 5th, 10th and 15th years of the concession agreement.

The Company holds 35 concessions, 22 from Category 2 (75% of total RAP, 2018-2019 cycle) and 13 from Category 3 (25% of total RAP, 2018-2019 cycle) – for more details, see TAESA's Earnings Release.

50% RAP cut for Category 2 concessions

As mentioned above, the Category 2 transmission concession contracts provide for a 50% RAP cut as of the 16th year of commercial operation of the facilities. Considering that the concession contracts include facilities whose associated RAP portion will be reduced by 50% on different dates throughout its cycle, an equivalent RAP will be calculated to be received by the concessionaires over this cycle, and future cycles, considering the pro rata of the full RAP amount, without the cut, from the beginning of the cycle (July 1st) until the end of the 15th year of facilities' commercial operation, and the pro rata of the reduced RAP amount, from the starting date of the 16th year of the facilities' commercial operation until the end of the same cycle (June 30th).

In June of each year, ANEEL publishes a ratifying resolution that establishes the RAP values of transmission concessions for the cycle from July 1st of the current year to June 30th of the following year, reflecting the terms of the contracts, such as inflation adjustment, RAP cut, and tariff review, as well as inclusion of reinforcements and improvements, and new acquisitions.

22 concessions of category 2 in which TAESA holds direct and/or indirect stake are listed below with their respective RAP cut-off dates.

- For the 2017-2018 and 2018-2019 cycles, 7 concessions reached or will reach the 16th year of operation:
  - ETEP[3]: 99.7% of ETEP's RAP reached the 16th year of operation on 8/25/2017.
  - EATE[3]: 19.0% of EATE's RAP reached the 16th year of operation on 2/1/2018, 45.6% of RAP in 2/20/2018, and 33.5% of RAP in 3/10/2018.
  - TSN[3]: 89.9% of TSN's RAP reached the 16th year of operation on 3/4/2018, 4.0% of RAP in 4/5/2018, 0.7% of RAP in 5/22/2018, and 1.3% of RAP in 6/3/2018.
  - Novatrans (NVT): 16.3% of Novatrans's RAP reached the 16th year of operation on 6/3/2018; 19.4% of RAP will reach the 16th year of operation on 12/8/2018, 19.1% of RAP in 12/23/2018 and 45.2% of RAP in 4/8/2019.
  - GTESA: 100% of GTESA's RAP reached the 16th year of operation on 8/26/2018.
  - NTE: 100% of NTE's RAP will reach the 16th year of operation on 1/25/2019.
  - STE[3]: 19.0% of STE's RAP will reach the 16th year of operation on 6/27/2019. In 2019-2020 cycle, 36.6% of RAP will reach the 16th year of operation on 7/13/2019, and 42.1% of RAP in 7/18/2019.

- For future cycles, 13 concessions will reach the 16th year of operation[1]:
  - PATESA[3]: 98.2% of PATESA's RAP will reach the 16th year of operation on 9/1/2019.
  - ERTE[3]: 71.5% of ERTE's RAP will reach the 16th year of operation on 9/15/2019.
  - ENTE: 100% of ECTE's RAP will reach the 16th year of operation on 2/12/2020.
  - ETAU[3]: 34.2% of ETAU's RAP will reach the 16th year of operation on 4/17/2020 and 36.0% of RAP on 9/29/2020.
  - Munirah: 100% of Munirah's RAP will reach the 16th year of operation on 10/30/2020.
  - ATE I: 54.0% of ATE's RAP will reach the 16th year of operation on 10/8/2020 and 46.0% of RAP on 10/27/2020.
  - Transleste: 100% of Transleste's RAP will reach the 16th year of operation on 12/18/2020.
  - ATE II: 100% of ATE II's RAP will reach the 16th year of operation on 12/11/2021.
  - Transudeste: 100% of Transudeste's RAP will reach the 16th year of operation on 2/23/2022.
  - Transirapé[3]: 45.1% of Transirape's RAP will reach the 16th year of operation on 5/23/2022 and 15.9% of RAP on 30/5/2022.
  - Lumitrans[3]: 99.9% of Lumitrans' RAP will reach the 16th year of operation on 10/3/2022.
  - STC[3]: 71.9% of STC's RAP will reach the 16th year of operation on 11/8/2022.
  - ATE III[3]: 54.4% of ATE III's RAP will reach the 16th year of operation on 4/27/2023 and 40.1% on 5/23/2023.

- For the 2016-2017 cycle, 2 concessions reached the 16th year of operation[1]:
  - ETEO: 100% of ETEO's RAP reached the 16th year of operation on 10/19/2016.
  - ECTE[3]: 67.6% of ECTE's RAP reached the 16th year of operation on 3/9/2017 and 28.4% in 3/26/2017.

Notes:

1. The 50% reduction schedule of RAP mentioned above was taken from Technical Note no. 144-2018-SGT of ANEEL.
2. The RAP percentages were calculated based on the value of the RAP prior to the date of the first 50% cut.
3. For those concessions whose percentages of RAP indicated above do not add up to 100%, the difference is due to reinforcements/improvements that do not fall in the category 2 concession contracts subject to the 50% cut in RAP at the start of the 16th year of operation.

3. Summary: Main accounting differences between Regulatory and Corporate

ITEM	Regulatory	Corporate (IFRS)
Construction period	The costs related to the construction of the concession are classified as fixed asset. There is no revenue recognition. Interest of the project financing is capitalized in fixed asset.	Costs are recognized as construction costs. At the same time, the construction revenues are recognized (construction cost added by PIS/COFINS) with counterpart in the financial asset. The financial asset is remunerated by the financial asset remuneration rate (TRAF), also recognizing revenues under IFRS. Financing interest is recognized as a financial expenses, not being part of the financial asset.
End of construction and beginning of operation	The asset begins to be depreciated by the RAP, which is recognized as revenues. Any additional CAPEX is recognized as fixed assets.	TRAF is recalculated with the actual construction flows and with the updated inflows. Then the remuneration of the financial asset is recognized from this. Recognition of operational and maintenance revenues (O&M). Recognition of operational revenues from O&M services. Any CAPEX that does not generate revenues is accounted in the income statement, in the material costs line.
Inflation effect on the balance sheet	RAP is annually restated by the inflation of the twelve months prior to the beginning of the RAP cycle (IGP-M or IPCA, according to each concession agreement).	The financial asset is restated by the inflation (IGP-M or IPCA, according to each concession contract), also recognizing revenues from the monetary restatement of the financial asset. TAESA restates the asset monthly in its balance sheet.

Financial assets - indemnity	The asset is determined at the end of the concession by the residual value of the fixed asset and stays there until the end.	It is the amount of the residual value of the fixed asset that is recognized in the financial asset and will be indemnified at the end of the concession.
Effect of federal taxes over revenues	Taxes are calculated and collected over the receivables (RAP).	Taxes are calculated on all revenues recognized in the IFRS Accounting, except for the indemnity revenues, in which TAESA understands that PIS/COFINS do not affect because it is an indemnity.
Adjustment Portion (PA) and Variable Portion (PV)	The PA is a temporary adjustment and it does not reduce the total RAP to be received during the full term of the concession. It does not impact the result of the period, generating payables or receivables accounts. The PV is an adjustment made as a consequence of the unavailability of the transmission line in the period. It impacts the result of the period.	They are treated by the same amount registered in the Regulatory Accounting, affecting the revenues of O&M services, that is, it does not affect the cash flow of the financial asset.

4. Impact of the 50% RAP cut to shareholders' earnings distribution

Due to the 50% cut in RAP for the Category 2 concessions, the Company expects a more significant impact on regulatory revenues between the RAP cycles 2018-2019 and 2019-2020, when two of its largest and oldest concessions, TSN and Novatrans, will completely suffer the fall of their respective RAPs. As detailed previously, there will be other RAP cuts in the smaller concessions, consequently with a less significant impact on the Company's result. Nevertheless, TAESA has 8 projects under construction that are expected to start its operation between 2019 and 2022. Therefore, during those years, there will be a "valley" in the regulatory net revenues due to these cuts, which will be offset further on by the projects under construction.

The drop in regulatory revenues, due to the RAP cut, will influence the regulatory net income. However, as explained in details throughout this technical note, **this RAP effect does not affect the net income under IFRS, which is the basis for the dividend and interest on equity distribution**.

In addition, over the last few years, the regulatory result, which reflects the Company's cash position, has been higher than the IFRS results. In other words, the Company generates operating cash (regulatory result) higher than what can be distributed as dividends, whose cap is the net income under IFRS less legal and tax incentive reserves. Consequently, TAESA uses this cash surplus for other activities such as debt amortization and investments in new projects (greenfield and brownfield).

It is worth highlighting here how the behavior between the Regulatory and IFRS results is over a single concession term. In the construction period of the transmission asset, there is still no regulatory revenues, since the company only receives RAP when the concession is energized (starts the operation), but in that period there are already IFRS revenues, as explained in section 1 of this document (Corporate Accounting). Therefore, at the time when the concession starts its operations, IFRS revenues practically reach its peak, while there are no regulatory revenues (cash). From the date when the concession becomes operational, it starts to receive RAP adjusted annually by inflation, while IFRS results gradually reduces due to the amortization of the financial asset. In other words, excluding the effects of tariff reviews and RAP cuts, IFRS results starts higher than Regulatory results, and at some point in the concession, Regulatory results become greater than IFRS results.

Therefore, based on the reasons presented in this technical note and considering the Company's current concessions and estimates, **the reduction in the Regulatory results (cash) in the next years will not affect the distribution of dividends to shareholders**. That is, even with the 50% cut in RAP of Category 2 concessions, the operating cash flow generated by TAESA together with the dividends received from its subsidiaries are sufficient to pay (i) its operation, (ii) maximum dividend payout, (iii) interest on debt, and (iv) taxes. The Company will need to issue debt only to roll over the current debt and to invest in the projects under construction.