

<u>Agenda</u>

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- **1.2** Regulation Basic Concept
- **1.3** Value creation
- **1.4** Tariffs

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- 2.1 Losses
- **2.2** Regulatory Operational Costs x PMSO
- **2.3** Irrecoverable Revenues x ADA
- **2.4** Energy Sales
- **2.5** Other Revenues
- **2.6** Other items
- **2.7** Concession financial asset
- **2.8** New contract

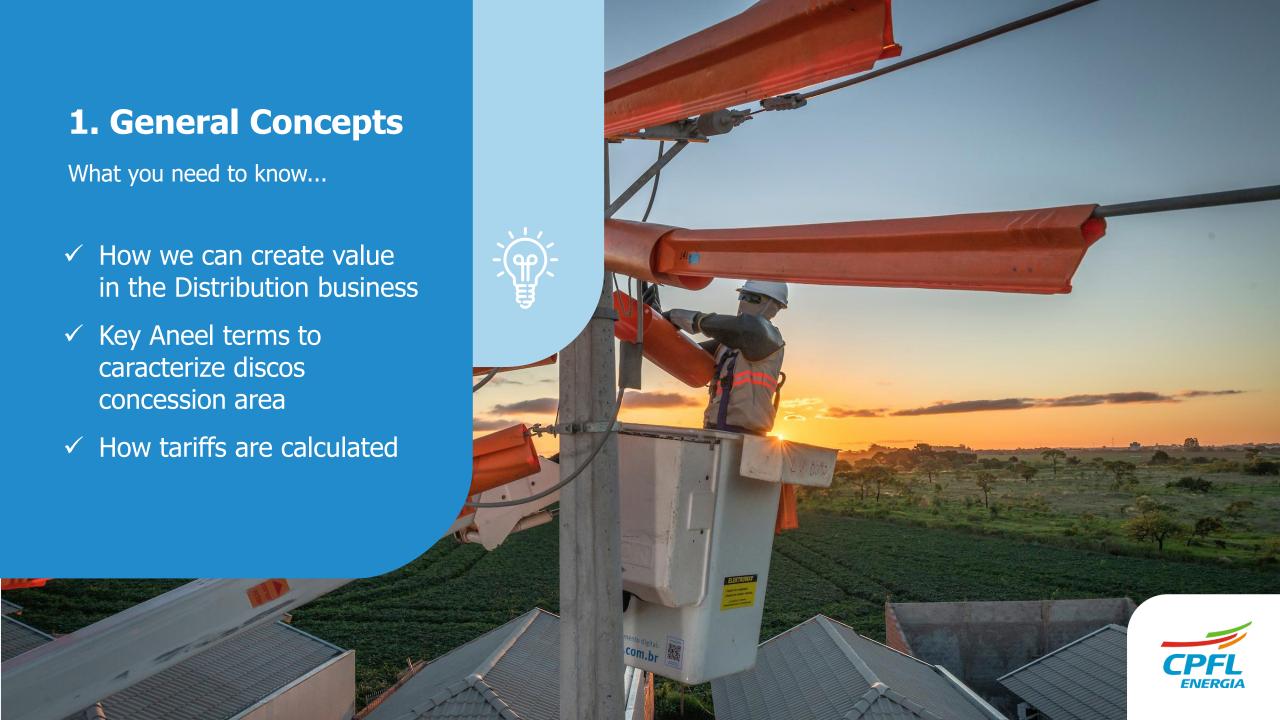
3 Taxes

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- 4.1 X Factor
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- **4.3** Overcontracting
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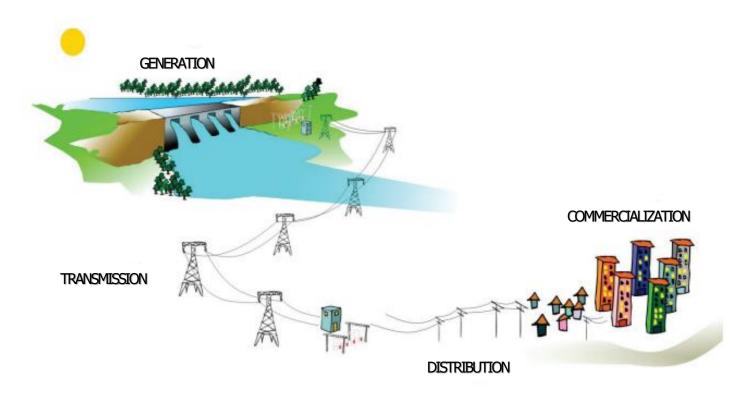




1.1 Distribution Overview



Overview: Distribution Segment in the Power Sector





Distribution System

It is the segment of the Power Sector dedicated to supplying electricity to the final consumer and other users, by lowering the voltage coming from the transmission system.

The distribution system comprises the electrical grid and the set of installations and electrical equipment that operate at high voltage levels (greater than or equal to 69 kV and less than 230 kV), medium voltage (greater than or equal to 2.3 kV and less than 69 kV) and low voltage (less than 2.3 kV).



1.2 Regulation Basic Concept



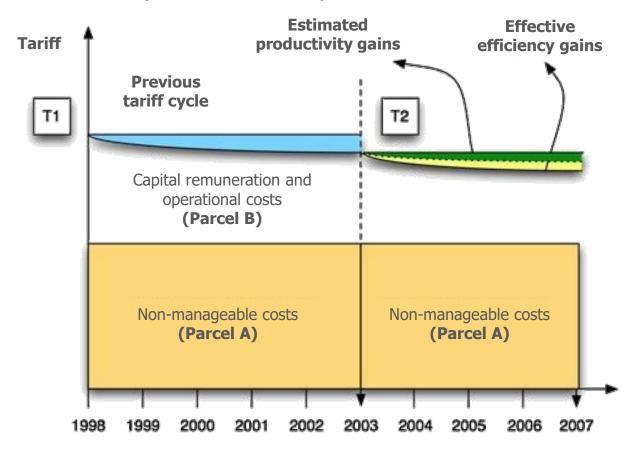
Price Cap Model

Conceptually, the sharing of productivity gains by concessionaires with consumers occurs between tariff review events



Tariff Repositioning Rationale

Productivity and Efficiency Gains



X Factor encourages an increase in the productivity of the sector, as in the period between tariff revisions, concessionaires can appropriate the productivity gain obtained above the X Factor value set by the regulator (price cap).

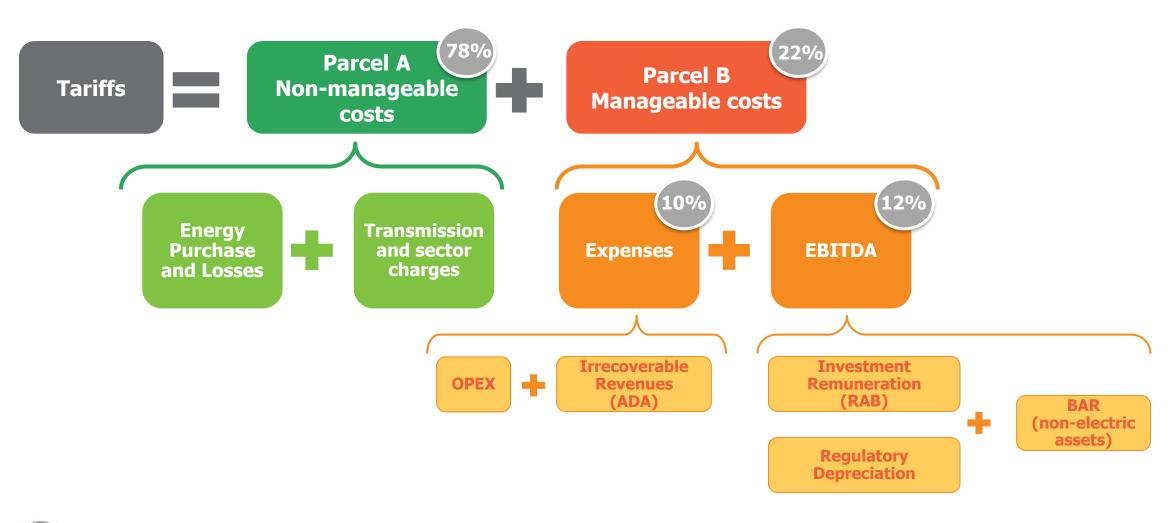


1.3 Value Creation



Value creation in Distribution

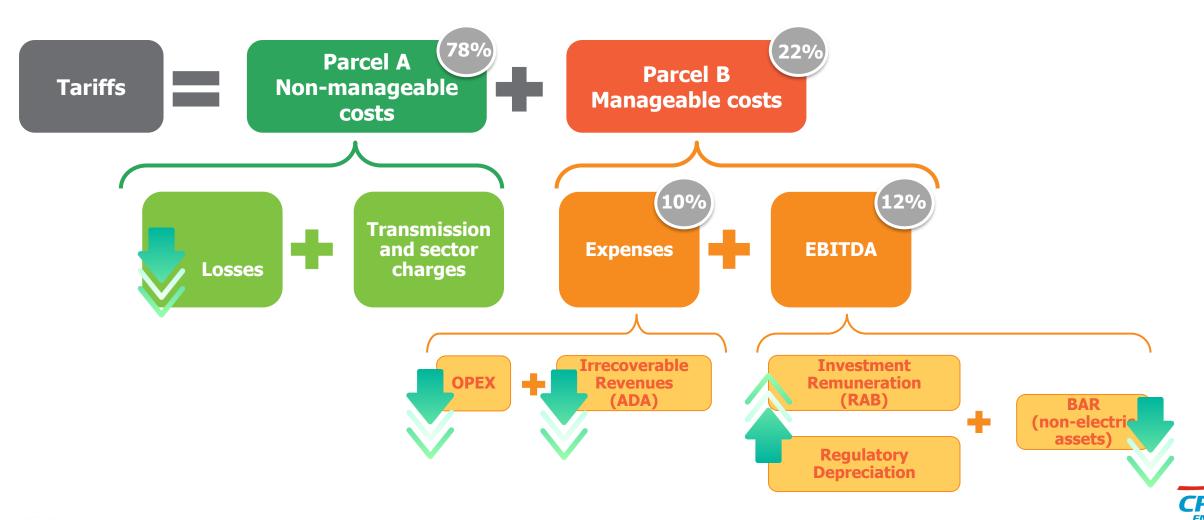
How to make money in the Distribution business?





Value creation in Distribution

How to make money in the Distribution business?



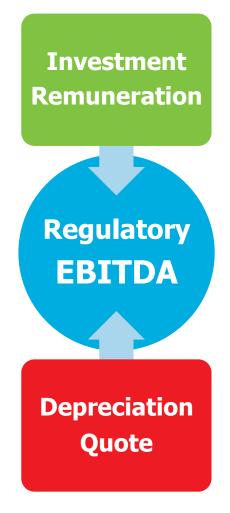


Discos' Tariff Composition Ebtida

Investment Remuneration is

the portion intended to cover the shareholder's remuneration for the capital invested in the concession







Depreciation Quote considers the depreciation and amortization of investments over its useful life



Discos' Tariff Composition Ebtida



Investment Remuneration

is the portion intended to cover shareholder and lenders remuneration for the capital invested in the concession.





Discos' Tariff Composition Ebtida



Depreciation Quote

considers the depreciation and amortization of investments over their useful life





Distribution Regulatory WACC (PRORET 2.4)

- **Ke** Sample: NTN-B of the last 10 years (including reference year) and Beta of US companies (EEI Members)
- **Kd** based on the debentures issuance cost of companies in the sector

Sample: debentures issued by distribution companies in the last 10 years

- Capital structure considers Net Debt/EBITDA = 3x
 for the highest indebtedness: Ke: 52% | Kd: 48%
- Considers delta related to business risk

Updates: done annually, and once applied, is final until the next Tariff Revision

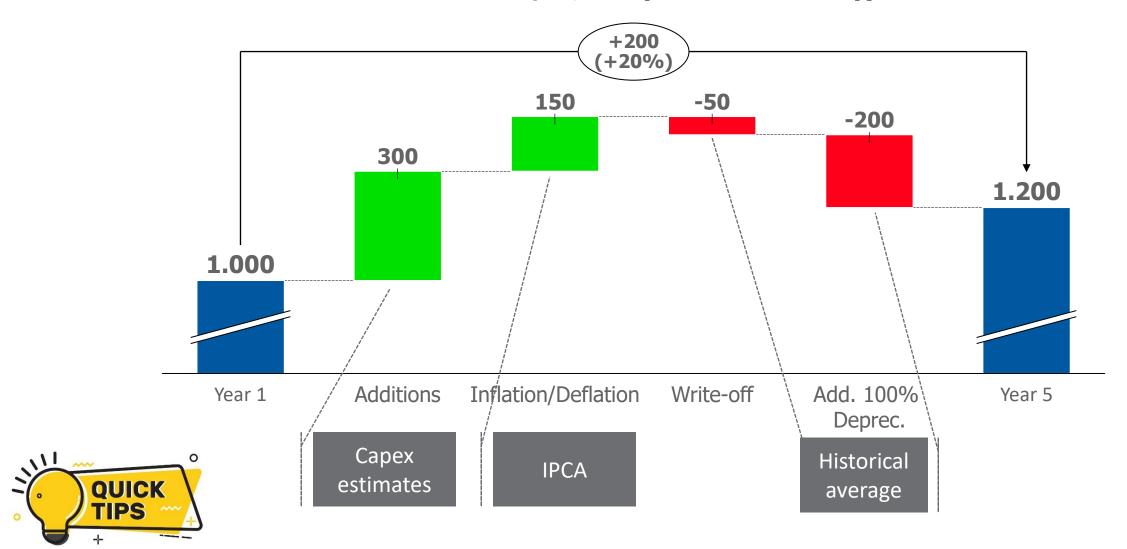
The r_{WACC} rates are calculated for the 5 years prior to the year of application, being:

- Ke's remuneration average of the previous 5 years
- Kd remuneration year before the year of application



RAB – Theoretical Example

Gross RAB | R\$ MM (Nominal Currency)





RAB – Remuneration Asset Base

For goods with a short life cycle, it is worth paying attention to the moment when Capex is performed



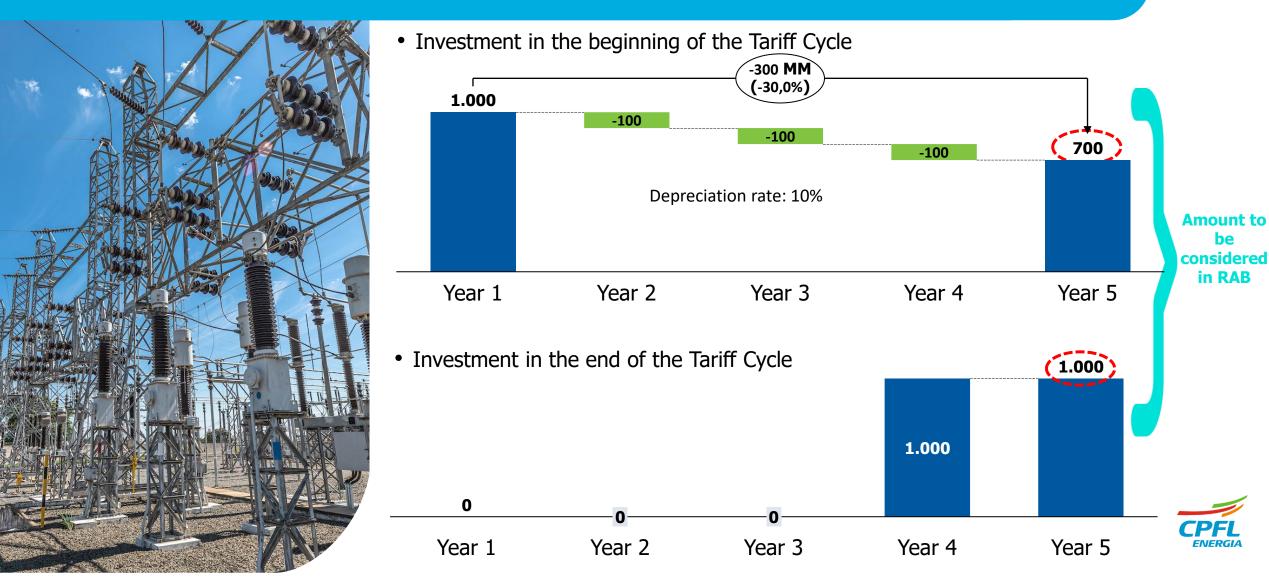
• Investment in the beginning of the Tariff Cycle





RAB – Remuneration Asset Base

For goods with a short life cycle, it is worth paying attention to the moment when Capex is performed



BAR – Non-electric assets

The **BAR** comprises the following groups of Fixed Assets in Service (AIS) and Intangible:

✓ Intangible – Softwares, Others

✓ Machinery and Equipment – Administration

✓ Land – Administration

√ Vehicles

✓ Buildings, Civil Works and Improvements – ✓ Furniture and appliances Administration

BAR: Non-electric assets, that is, they are not included in RAB's AIS (Fixed Assets in Service)

In terms of regulation: it is defined based on a relationship with the AIS obtained in the RTP appraisal reports

$$BAR = 2,7159 \cdot (AIS - IA)^{-0,167+1} \cdot (IPCA_1/IPCA_0)^{0,167}$$
 (9)

where:

BAR: Amount of regulatory remuneration base related to investments in non-electric assets;

AIS: Fixed Assets in Service approved in the RTP;

IA: AIS utilization rate approved in the RTP; IPCA₁: IPCA index in the date of RTP; and

IPCAº: IPCA in 01/01/2015





Source: SPARTA

Key takeaways

01

The current regulation model seeks to share the productivity gains obtained by the disco with its consumers





In order to create value in Distribution, constant investments and a continuous search for operational efficiency and cost reduction are required

02

Not all investments bring positive results:

03

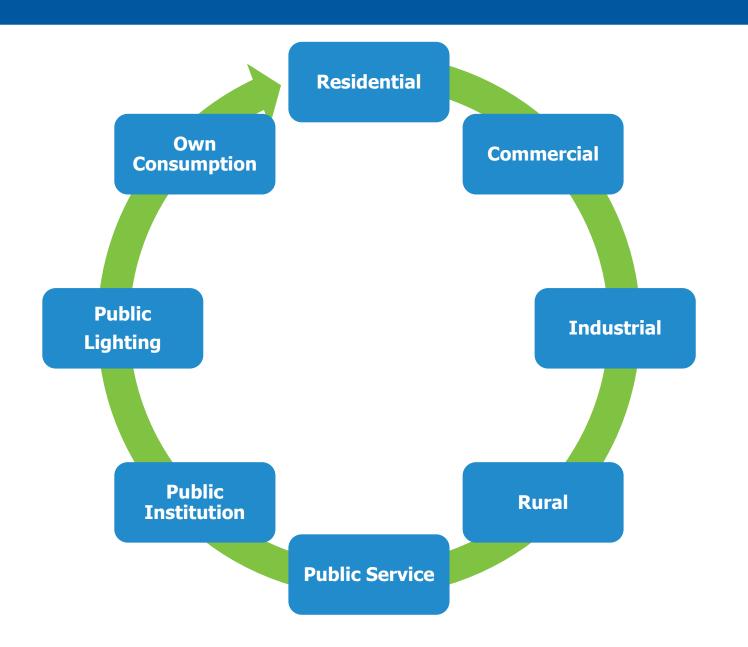
- Prudent investments in RAB assure capital remuneration and regulatory depreciation, although decreasing depending on the timing of their realization
- Investments in **BAR** are equivalent to an "expense"; therefore, they do not have remuneration for the invested capital, although they collaborate to improve business efficiency



1.4 Tariff composition



Tariff composition – breakdown by segment



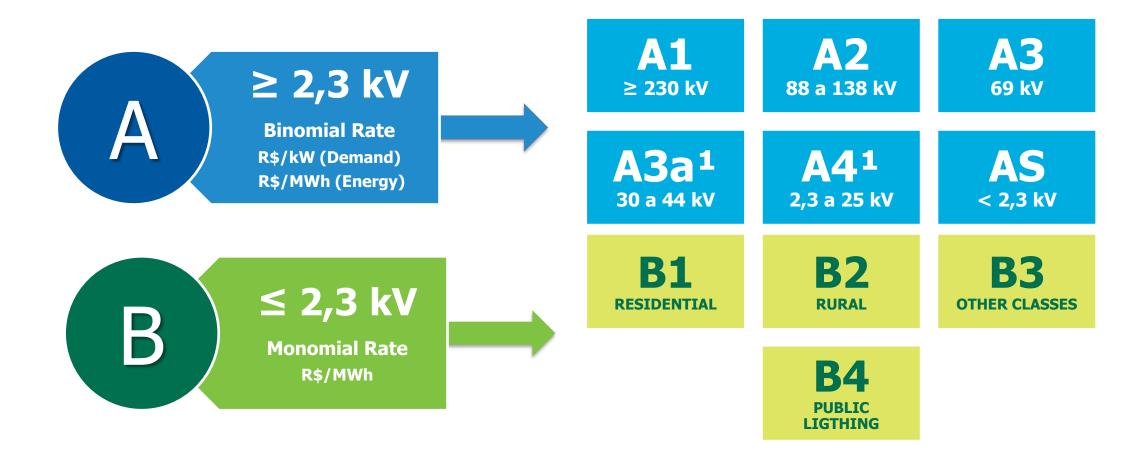
Definition given by

Article 177 of Decree No. 41,019/1957,

amended by Decrees No. 75,887/1975 and No. 86,463/1981.

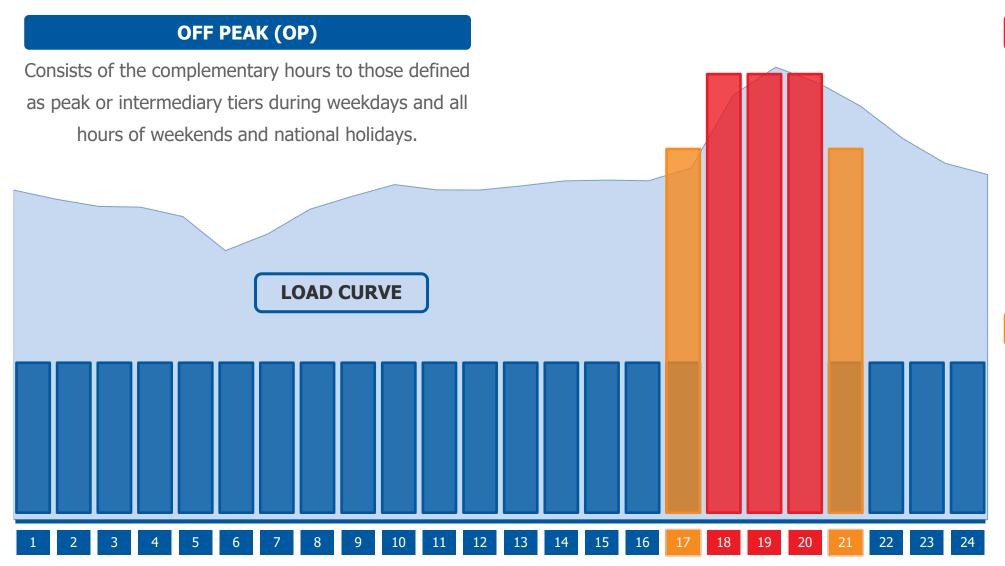


Tariff composition – breakdown by group and voltage





Tariff composition – tariff tiers



PEAK (P)

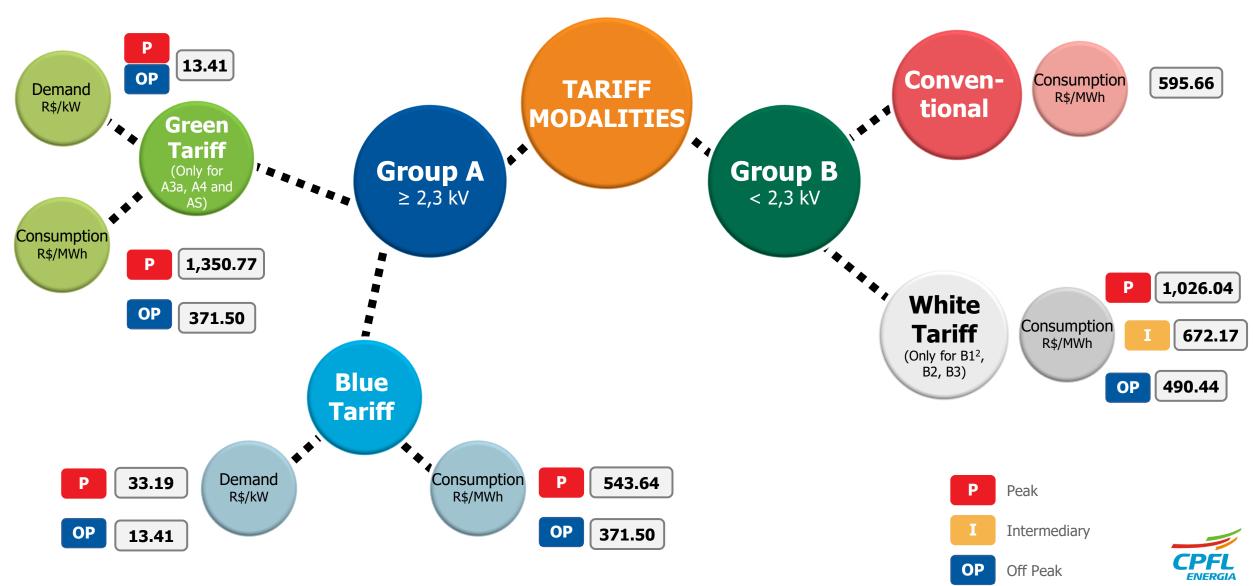
Three consecutive hours
within weekdays defined by
the DISCO and approved by
ANEEL, exception made on
weekends and national
holidays.

INTERMEDIARY (I)

Consists of two hours within weekdays – one immediately before and one immediately after the Peak tariff tier.



Tariff composition – tariff modalities



Tariff Level - Annual Tariff Adjustments (RTA) and Periodic Tariff Revisions (RTP)

Required Revenue – Tariff Level



- OPEX
- Rate of Return and Depreciation



Adjusted for inflation (-) expected productivity and quality index (X factor)

Periodic Tariff
Revision
(RTP)
every 4 or 5 years

Share gains with consumers and incentivize increase in efficiency



Non-manageable Costs

- Energy Purchase
- Charges and Transmission



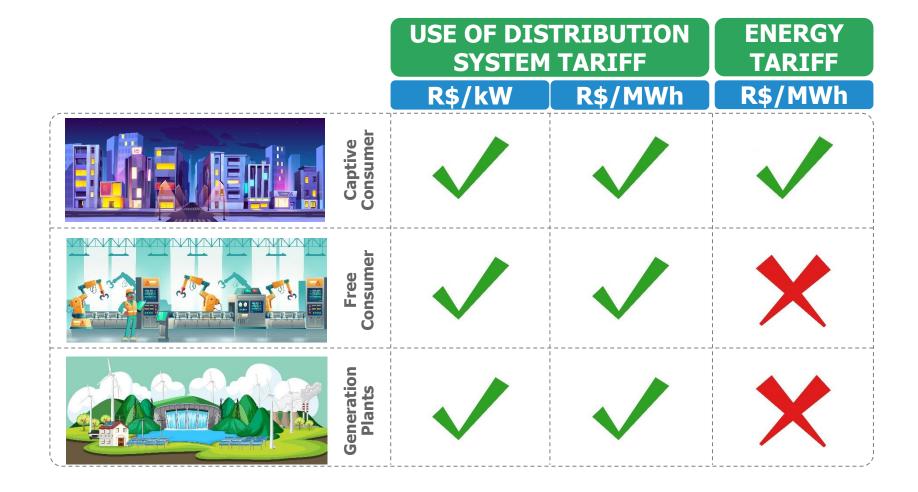
Liquidation of Debts and Credits

Compensation Account of Parcel A Items (CVA)

Recalculated every year to offset some effects of inflation on tariffs and pass through to consumers certain changes in Disco's cost structure that are beyond their control, such as energy's purchase costs and certain sector charges.



Tariff Structure – How Required Revenue is divided among consumers



In terms, the migration of consumers to the free market is neutral for Distributors, since the payment of demand (TUSD) remains after the migration.

The challenge is due to the risk of overcontracting.



Tariff Composition for Captive and Free Customers

Tariff for the Use of Distribution System: amounts determined by ANEEL, in R\$/MWh or R\$/kW, applied to the monthly bills of customers of the energy distribution system

Tariff for the Use of Distribution System (TUSD)





Tariff Composition – only for Captive Customers



Energy Tariff: Values defined by ANEEL, in R\$/MWh, charged by the monthly billing by the disco in reference to the consumption of the contracts

Energy Tariff(TE)

[R\$/MWh]

Energy Purchase¹

ITAIPU Transmission¹

LossesNational Grid

Sector Charges¹

CFURRH

R&D_EE

ESS/EER

Regulated Contracts
PM 579 Quotas
Angra Quotas
Itaipu Quotas



Key takeaways

After defining the Distributor's Required Revenue, Aneel distributes the total amount among the tariff spots, in order to give the appropriate tariff sign to each type of customer





Consumers who opt for the free market do not pay the Energy Tariff (TE), only the TUSD. In this case, the customer must negotiate its energy in the free market (ACL), which follows its own rules

05

Parcel A is revised annually to

update costs.
Parcel B is determined in the RTP, incorporating investments from the previous cycle, and is subject to monetary restatement in the RTAs





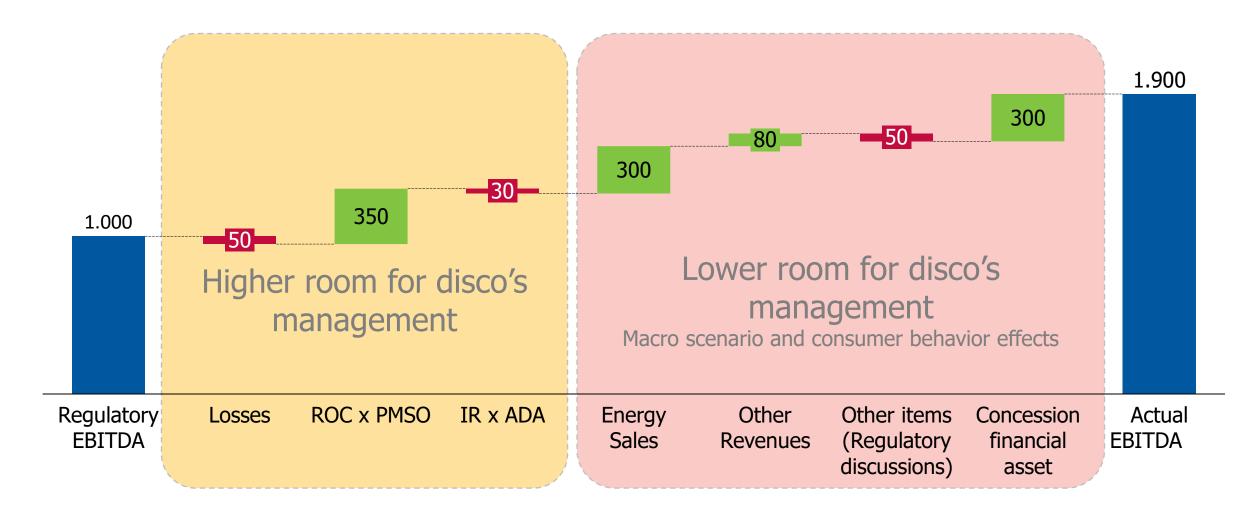


What items assure the outperformance?

- ✓ When the consumer behavior is (un)favorable
- ✓ When operational efficiency is key
- ✓ Factors not associated to tariff regulation
- ✓ What changes in the "new" concession contract



Actual versus Regulatory EBITDA – Theoretical example



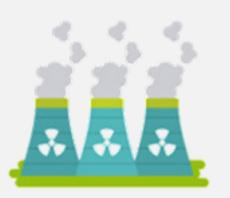


2.1 Losses



Energy Purchase







Regulated Agreements (Bilateral agreements and auctions)

Quotas from renewals (Law 12,783/13)

Angra quotas





Itaipu quotas

Energy Losses¹



Distribution Losses – Theoretical Example

Losses impact (GWh) = (% Regulatory losses - % Actual losses) * Load in the concession area

			Regulatory	Actual
GWh	А	Load in the concession area	1,000	900
	В	Distribution Losses	100	99
Losses percentage	C = B/A	Distribution Losses	10.0%	11.0%
	$D = C \times A$	Actual Losses - Regulatory Losses		1.0%

Losses impact (R\$) = MWh actual above regulatory losses * Pmix R\$/MWh

GWh	$E = D \times A$	1.0% x Load	9.0
Impacto	F	Energy Purchase average price	200.00
R\$	$G = F \times E$	Impact (currency units)	(1,800)

The limit for reducing losses is not the regulatory level, because if it is below this level, it can bring a gain to the disco.



National Grid Losses – Theoretical Example

Regulatory losses consider last 12 months

Losses impact (GWh) = (% Regulatory losses - % Actual losses) * Gross captive load

			Regulatory	Actual
GWh	А	Gross captive load	600	550
_	В	National Grid Losses	15.0	12.1
Losses percentage	C = B/A	National Grid Losses	2.50%	2.20%
	$D = C \times A$	Actual Losses - Regulatory Losses		(0.30%)

Losses impact (R\$) = MWh MWh actual above regulatory losses * Pmix R\$/MWh

GWh	$E = D \times A$	(0.30%) x Load	0.165
Impact	F	Energy Purchase average price	200.00
R\$	$G = F \times E$	Impact (currency units)	33

The limit for reducing losses is not the regulatory level, because if it is below this level, it can bring a gain to the disco.



2.2 Regulatory Operational Costs x PMSO



ROC x PMSO

REGULATORY OPERATIONAL COSTS

- ☐ Analysis based on efficiency concepts:
 - Costs with personnel, materials, third-party services and others
 - **Efficiency** is the relationship between outputs and inputs, measured by discos benchmarking
 - Stimulates competition between companies
 - The greater the efficiency, the greater the percentage of transfer of real costs
 - There is no recognition of legal expenses, except for labor convictions (from the 4th cycle onwards), actuarial deficits and surpluses and the Retirement and/or Voluntary Dismissal Program

Input PMSO

Output

Consumers, Energy Sales, Grid, Quality and Losses

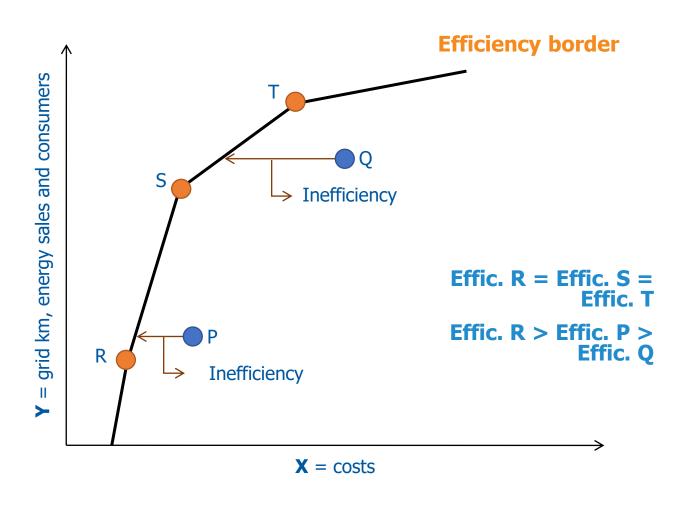


- Personnel
 - Wages and charges
- MSO
 - Operational Services and Materials
 - Vehicles, IT, Infra
 - Judicial provisions with tariff coverage



Methodology

OPERATIONAL COSTS



- For a company to become more
 efficient in terms of benchmarking,
 it is necessary to improve the
 input/output ratio.
- As the discos do not control the variables customers, grid km and energy sales, the only point of action are the operating costs.



Key assumption: What is the OPEX level compared to tariff coverage?



Where to get this information to your model?

Coverages are disclosed in the SPARTA Document (ANEEL) at the time of RTP.

CPFL Energia publishes an estimate of updated amounts on the IR website, using our own methodology, after each RTA.

Go back

cpfl santa cruz

jul-221

100%

72,0%

23,2%

13,1%

35.2%

0,6%

28,0%

10.40%

5.09%

11,81%

0,00%

R\$ MM

1.458,4

1.050,6

337,7

191,2

513.6

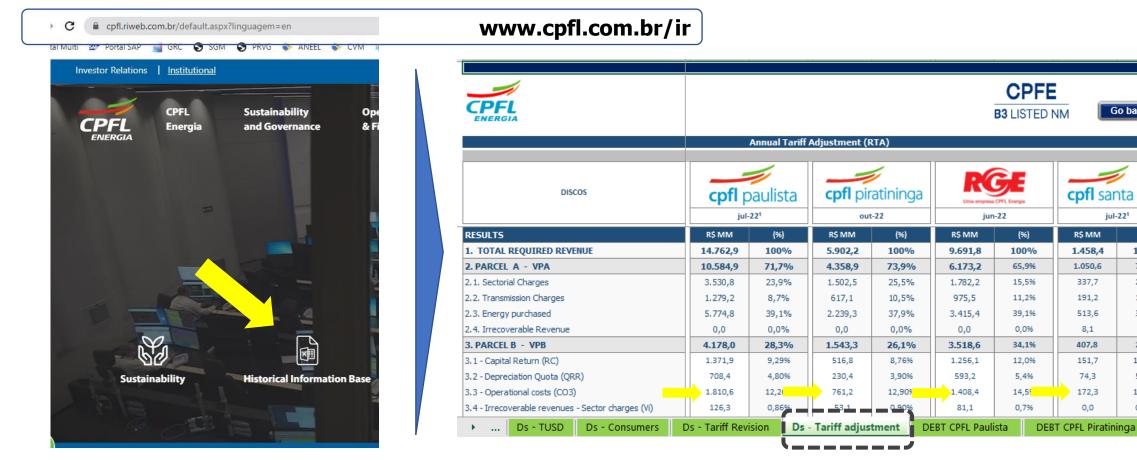
8.1

407,8

151.7

74,3

172,3



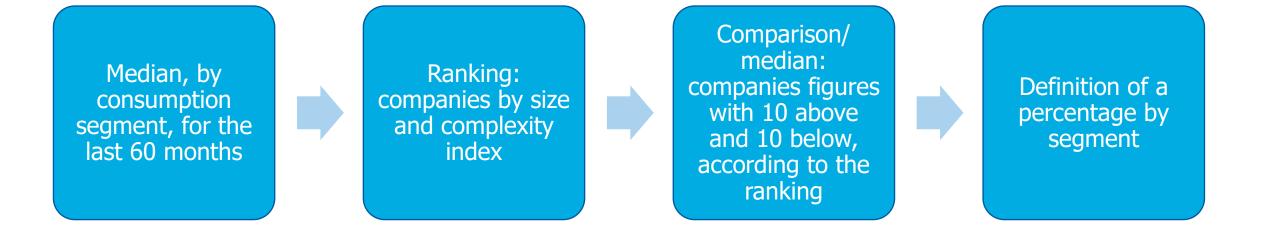
2.3 IR x ADA



IR x ADA

Tariff coverage

Sub-module 2.6 A - Energy Losses and Irrecoverable Revenues





IR x ADA



Coverage for Irrecoverable Revenues

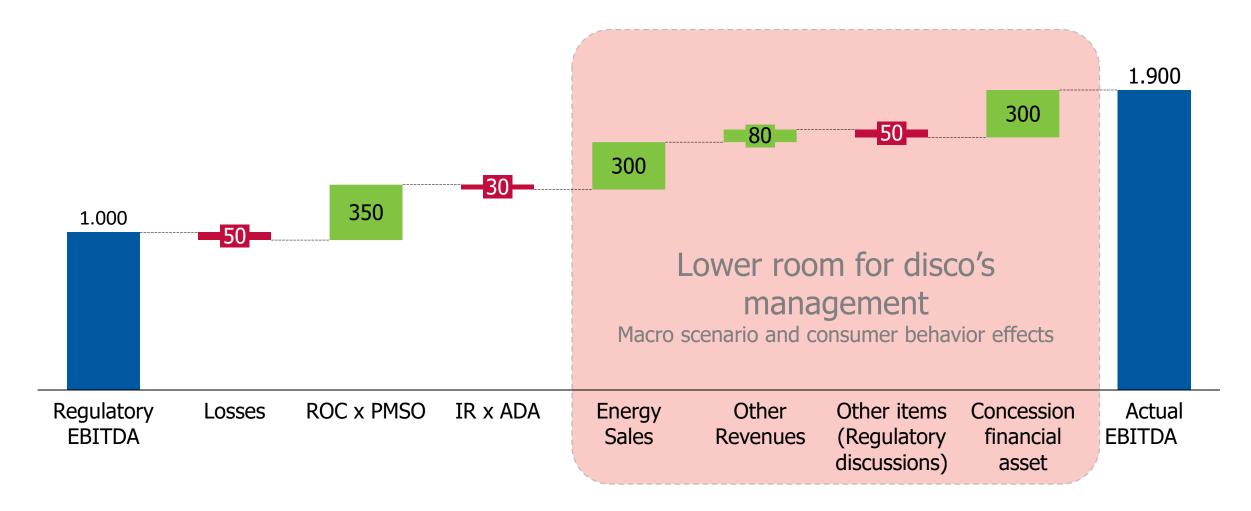
Annual Tariff Adjustment (RTA) **cpfl** paulista **cpfl** piratininga DISCOS jul-221 out-22 (%) RESULTS R\$ MM R\$ MM (%) 3. PARCEL B - VPB 28,3% 26,1% 4.178,0 1.543,3 3.1 - Capital Return (RC) 1.371,9 9,29% 516,8 8,76% 3.2 - Depreciation Quota (QRR) 708.4 4,80% 230,4 3,90% 3.3 - Operational costs (CO3) 1.810,6 12,26% 761,2 12,90% 3.4 - Irrecoverable revenues - Sector charges (Vi) 126.3 53,1 0,90% 0,86% 3.5 - Annual cost of non-electrical assets (CAIMI) 339,7 2,30% 108,9 1,84% 3.6 - Adjustment due to realized capex 0,0 0,00% 0,0 0,00% 3.7 - Parcel B productivity index -178.8 -1,21%-127,1-2.15%

CPFL Paulista Income Statement

	1H22
OPERATING REVENUES	
Electricity Sales to Final Customers	8.434.205
Electricity Sales to Distributors	120.304
Revenue from building the infrastructure	928.401
Update of concession's financial asset	302.725
Sectorial financial assets and liabilities	(712.848)
Other Operating Revenues	1.732.880
	10.805.666
ADA ADA%	(87.002) 1,03%



Actual versus Regulatory EBITDA – Theoretical example





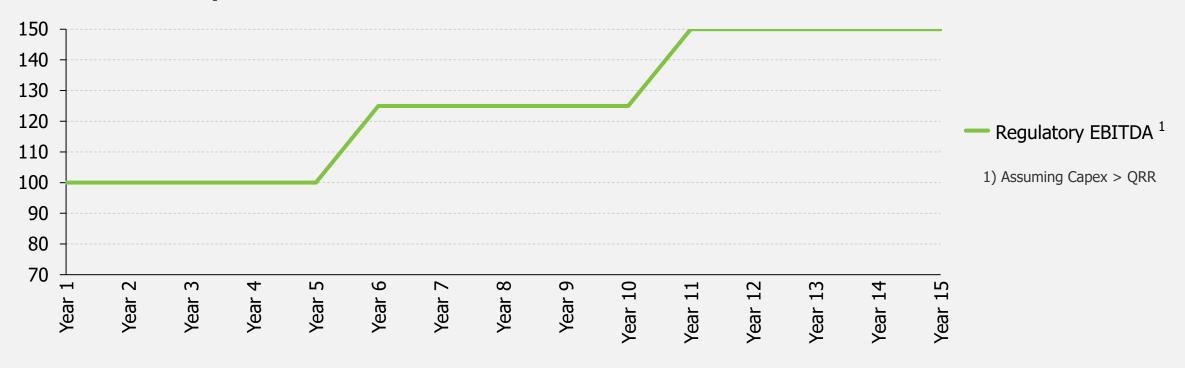
2.4 Energy Sales



Energy Sales

How energy sales affect the EBITDA overtime?

Theoretical example:





Energy Sales

How energy sales affect the EBITDA overtime?

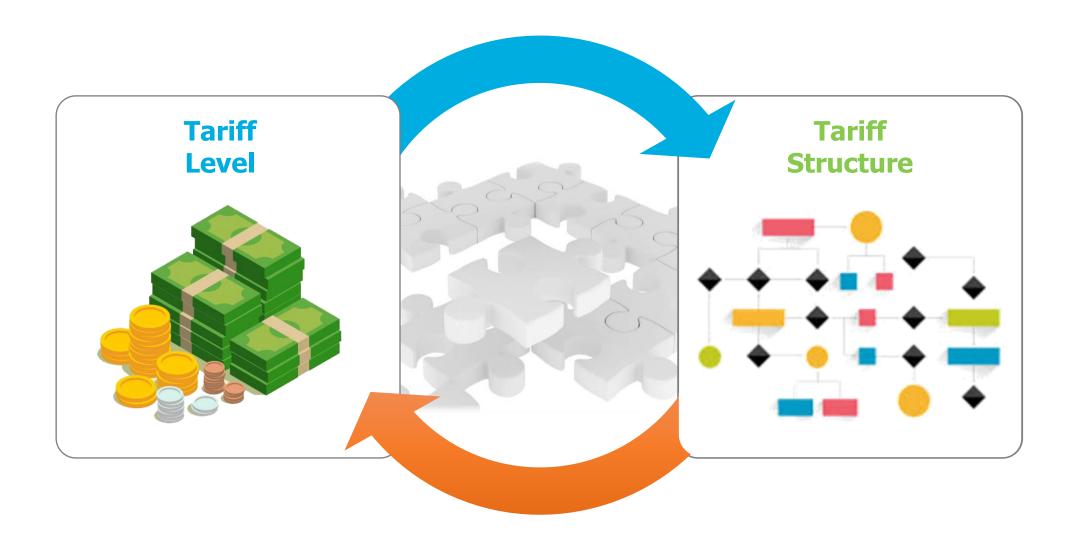
Theoretical example:



- Actual Ebitda is influenced by energy sales performance in the intra-cycle period
- Gains/losses observed over the years are disco's risk
- In the RTP (Tariff Revision), the energy sales volume is adjusted, as well as the other parameters (reflecting the increase in RAB)



Tariff composition – Tariff level and structure



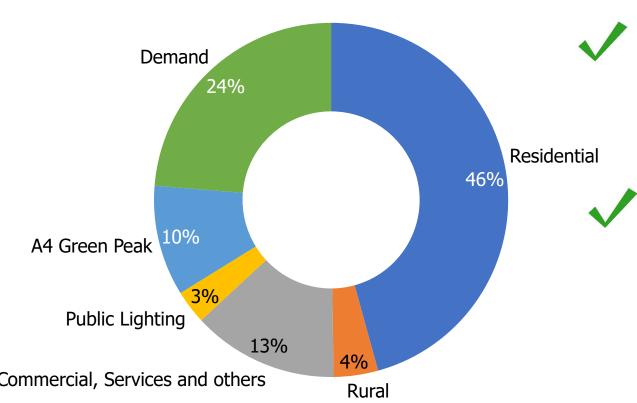


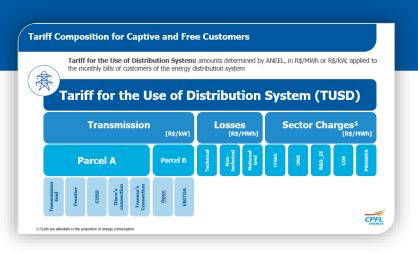
Breakdown of "Fio B" Revenue by segment



"Fio B" is the tariff component charged in TUSD. Each segment and customer subtype has a different weight

"Fio B" Revenue by segmentCPFL Paulista in 1H22





Customers connected in Low Voltage -Residential, Rural, Public Lighting, Commercial,
Services and Others - obey a dynamic linked to the
consumption level of each segment

Customers connected in Medium or High Voltage - Demand and A4 Green Peak have a slightly different rationale:

- **Demand** is contracted for the next 12 months; therefore, revenue is more stable;
- The A4 Green Peak consumption depends on the customer's activity.

2.5 Other Revenues



Other Revenues

Example – CPFL Paulista 1Q22 Financial Statement (Portuguese only)

(19) RECEITA OPERACIONAL LÍQUIDA

	202	22	202	21
Receita de operações com energia elétrica	2° Trimestre	1° Semestre	2° Trimestre	1° Semestre
Classe de consumidores				
Residencial	2.232.334	4.598.687	1.923.301	3.991.534
Industrial	373.598	742.680	338.202	684.512
Comercial	825.479	1.676.317	636.911	1.351.165
Rural	157.786	302.133	165.545	294.388
Poderes públicos	148.839	288.109	98.822	203.587
lluminação pública	132.324	281.185	124.829	233.030
Serviço público	208.862	422.639	194.462	381.728
Fornecimento faturado	4.079.223	8.311.749	3.482.072	7.139.944
Fornecimento não faturado (Ifquido)	(78.626)	122.456	(63.858)	(38.406)
(-) Transferência da receita relacionada à disponibilidade da rede elétrica	, ,		, ,	
ao consumidor cativo	(1.931.925)	(3.549.689)	(1.570.366)	(3.205.314)
Fornecimento de energia elétrica	2.068.672	4.884.516	1.847.848	3.896.224
Outras concessionárias, permissionárias e autorizadas	8.721	20.219	14.642	29.308
(-) Transferência da receita relacionada à disponibilidade da rede elétrica				
ao consumidor cativo	(2.985)	(5.836)	(2.554)	(5.041)
Energia elétrica de curto prazo	Š9.757 [′]	100.085	260.393	329.261 [°]
Suprimento de energia elétrica	65.493	114.468	272.481	353.528
Receita pela disponibilidade da rede elétrica - TUSD consumidor cativo	1.934.910	3.555.525	1.572.920	3.210.355
Receita pela disponibilidade da rede elétrica - TUSD consumidor livre	691.173	1.235.439	521.819	1.012.258
(-) Compensação pelo não cumprimento de indicadores técnicos	(6.485)	(19.199)	(7.571)	(22.712)
Receita de construção da infraestrutura de concessão	496.342	928.401	303.210	549.436
Ativo e passivo financeiro setorial (nota 7)	(97.836)	(712.848)	379.131	482.690
Atualização do ativo financeiro da concessão (nota 8)	177.666	302.725	88.584	187,688
Aporte CDE - baixa renda, demais subsídios tarifários e descontos				
tarifários – liminares	202.620	374.418	143.540	277.900
Outras receitas e rendas	73.307	142.222	60.524	117.570
Outras receitas operacionais	3.471.697	5.806.683	3.062.157	5.815.185
Total da receita operacional bruta	5.605.862	10.805.666	5.182.485	10.064.937



Other Revenues

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Energia elétrica de curto prazo	59.757	100.085	260.393	329.261
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Aporte CDE - baixa renda, demais subsídios tarifários e descontos				

Outras receitas e rendas	73.307	142.222

 Outras receitas operacionais
 3.471.697
 5.806.683
 3.062.157
 5.815.185

 Total da receita operacional bruta
 5.605.862
 10.805.666
 5.182.485
 10.064.937



Other Revenues

Examples:

- ✓ Pole rental
- ✓ Revenue from services provided
- ✓ Leases
- ✓ Charged services

Regulatory model

- Revenue remains in the result at the 1st moment, with all taxes due
- 60% of gross revenue is allocated to tariff reduction mechanism → deduction of Parcel B after RTP
- Capture: 36-month average revenue prior to the 6th month before RTP, updated by IGP-M, multiplied by 12

Effect in results in a given period

Theoretical examp	le
Revenue	1,000
PIS/Cofins (non-neutral)	-93
R&D	-10
EBITDA	898
Income Tax	-305
Net Income	592
·	



Other Revenues – effect on the long term

Simulation assuming cost = ZERO

			Cycle 1					Cycle 2		
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Other Revenues	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Parcel B - reduction						-600	-600	-600	-600	-600
Gross Revenue	1,000	1,000	1,000	1,000	1,000	400	400	400	400	400
PIS/Cofins (non-neutral)	-93	-93	-93	-93	-93	-37	-37	-37	-37	-37
R&D	-10	-10	-10	-10	-10	-4	-4	-4	-4	-4
EBITDA	898	898	898	898	898	359	359	359	359	359
Income Tax	-305	-305	-305	-305	-305	-122	-122	-122	-122	-122
Net Income	592	592	592	592	592	237	237	237	237	237



2.6 Other items



Aneel's quality indicators – SAIDI/SAIFI



SAIDI/CAIDI (System/Consumer Average Interruption Duration Index): Indicates the number of hours, on average, that a consumer goes without electricity during a period, usually monthly.

SAIFI/CAIFI (System /Consumer Average Interruption Frequency Index): Indicates how many times, on average, there was interruption in the consumer unit.

DMIC (Maximum Interruption Duration per Consumer Unit): Maximum continuous power outage at a consumer unit or connection point.

SAIDI and SAIFI are verified per electric set. CAIDI and CAIFI are individual indicators that generate the payment of financial compensation by the discos to consumers, verified per consumer unit.



Compensatory Fines

Example – CPFL Paulista 1Q22 Financial Statement (Portuguese only)

(19) RECEITA OPERACIONAL LÍQUIDA

	202	22	202	21
Receita de operações com energia elétrica	2° Trimestre	1° Semestre	2° Trimestre	1° Semestre
Classe de consumidores				
Residencial	2.232.334	4.598.687	1.923.301	3.991.534
Industrial	373.598	742.680	338.202	684.512
Comercial	825.479	1.676.317	636.911	1.351.165
Rural	157.786	302.133	165.545	294.388
Poderes públicos	148.839	288.109	98.822	203.587
lluminação pública	132.324	281.185	124.829	233.030
Serviço público	208.862	422.639	194.462	381.728
Fornecimento faturado	4.079.223	8.311.749	3.482.072	7.139.944
Fornecimento não faturado (líquido)	(78.626)	122.456	(63.858)	(38.406)
(-) Transferência da receita relacionada à disponibilidade da rede elétrica				
ao consumidor cativo	(1.931.925)	(3.549.689)	(1.570.366)	(3.205.314)
Fornecimento de energia elétrica	2.068.672	4.884.516	1.847.848	3.896.224
Outras concessionárias, permissionárias e autorizadas	8.721	20.219	14.642	29.308
(-) Transferência da receita relacionada à disponibilidade da rede elétrica				
ao consumidor cativo	(2.985)	(5.836)	(2.554)	(5.041)
Energia elétrica de curto prazo	59.757	100.085	260.393	329.261
Suprimento de energia elétrica	65.493	114.468	272.481	353.528
Receita pela disponibilidade da rede elétrica - TUSD consumidor cativo	1.934.910	3.555.525	1.572.920	3.210.355
Receita pela disponibilidade da rede elétrica - TUSD consumidor livre	691,173	1.235.439	521.819	1.012.258
(-) Compensação pelo não cumprimento de indicadores técnicos	(6.485)	(19.199)	(7.571)	(22.712)
Receita de construção da infraestrutura de concessão	496.342	928.401	303.210	549.436
Ativo e passivo financeiro setorial (nota 7)	(97.836)	(712.848)	379.131	482.690
Atualização do ativo financeiro da concessão (nota 8)	177.666	302.725	88.584	187.688
Aporte CDE - baixa renda, demais subsídios tarifários e descontos				
tarifários – liminares	202.620	374.418	143.540	277.900
Outras receitas e rendas	73.307	142.222	60.524	117.570
Outras receitas operacionais	3.471.697	5.806.683	3.062.157	5.815.185
Total da receita operacional bruta	5.605.862	10.805.666	5.182.485	10.064.937



Compensatory Fines

Example – CPFL Paulista 1Q22 Financial Statement (Portuguese only)

(19) RECEITA OPERACIONAL LÍQUIDA

	20	22	202	21
Receita de operações com energia elétrica	2° Trimestre	1° Semestre	2° Trimestre	1° Semestre
Classe de consumidores				
Residencial	2.232.334	4.598.687	1.923.301	3.991.534
Industrial	373.598	742.680	338.202	684.512
Comercial	825.479	1.676.317	636.911	1.351.165
Rural	157.786	302.133	165.545	294.388
Poderes públicos	148.839	288.109	98.822	203.587
lluminação pública	132.324	281.185	124.829	233.030
Serviço público	208.862	422.639	194.462	381.728
Fornecimento faturado	4.079.223	8.311.749	3.482.072	7.139.944
Fornecimento não faturado (líquido)	(78.626)	122.456	(63.858)	(38.406)
(-) Transferência da receita relacionada à disponibilidade da rede elétrica				
ao consumidor cativo	(1.931.925)	(3.549.689)	(1.570.366)	(3.205.314)
Fornecimento de energia elétrica	2.068.672	4.884.516	1.847.848	3.896.224
Outras concessionárias, permissionárias e autorizadas	8.721	20.219	14.642	29.308
(-) Transferência da receita relacionada à disponibilidade da rede elétrica				
ao consumidor cativo	(2.985)	(5.836)	(2.554)	(5.041)
Energia elétrica de curto prazo	59.757	100.085	260.393	329.261
Suprimento de energia elétrica	65.493	114.468	272.481	353.528
Receita pela disponibilidade da rede elétrica - TUSD consumidor cativo	1.934.910	3.555.525	1.572.920	3.210.355

(-) Compensação pelo não cumprimento de indicadores técnicos

Ativo e passivo financeiro setorial (nota 7) (97.836)(712.848) 379.131 482.690 177,666 88.584 187,688 Atualização do ativo financeiro da concessão (nota 8) 302.725 Aporte CDE - baixa renda, demais subsídios tarifários e descontos 277.900 202.620 374.418 143.540 tarifários - liminares Outras receitas e rendas 73.307 142.222 60.524 117.570 3.471.697 5.806.683 3.062.157 5.815.185 Outras receitas operacionais Total da receita operacional bruta 5.605.862 10.805.666 5.182.485 10.064.937

(12.714) (15.141)



Compensatory Fines

Example – CPFL Paulista 1Q22 Financial Statement (Portuguese only)

(19) RECEITA OPERACIONAL LÍQUIDA

	202	22	202	21
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Fornecimento de energia elétrica	2.068.672	4.884.516	1.847.848	3.896.224
Outras concessionárias, permissionárias e autorizadas	8.721	20.219	14.642	29.308
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ao consumidor cativo	(2.985)	(5.836)	(2.554)	(5.041)
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Receita pela disponibilidade da rede elétrica - TUSD consumidor cativo	1.934.910	3.555.525	1.572.920	3.210.355
Receita pela disponibilidade da rede elétrica - TUSD consumidor livre	691.173	1.235.439	521.819	1.012.258
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Receita de construção da infraestrutura de concessão	496.342	928.401	303.210	549.436
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Atualização do ativo financeiro da concessão (nota 8)	177.666	302.725	88.584	187.688
Aporte CDE - baixa renda, demais subsídios tarifários e descontos				
tarifários – liminares	202.620	374.418	143.540	277.900
Outras receitas e rendas	73.307	142.222	60.524	117.570
Outras receitas operacionais	3.471.697	5.806.683	3.062.157	5.815.185
Total da receita operacional bruta	5.605.862	10.805.666	5.182.485	10.064.937



Assumption for your model:

Historical average + % RTA

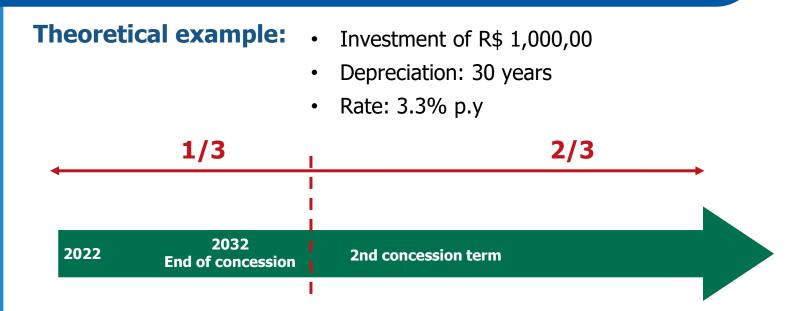


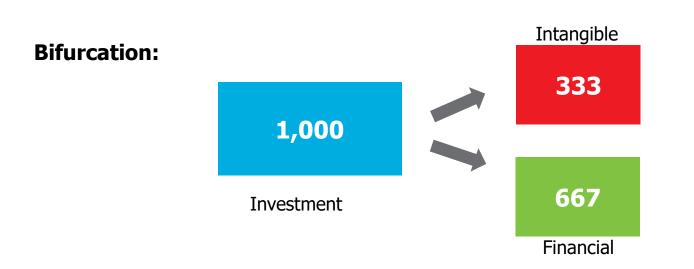
2.7 Concession financial asset



Concession financial asset

- It is the portion of the investment that cannot be amortized within the concession period
- It serves as a proxy for the indemnity to be received by the shareholder at the end of the concession, for the unamortized assets
- The monetary restatement of this asset is accounted for in operating revenue
- This is just an accounting record,with no cash effect







The items under management by discos are:

- Loss Reduction
- Efficiency in PMSO
- Delinquency reduction





Energy sales volumes different from those approved in the RTP affect the results.

Other Revenues and other effects – to a lesser extent – also contribute to Ebitda



09

The Concession Financial Asset has a relevant effect on Ebitda in the last years of the concession, although it does not represent a gain in valuation, as it has no cash effect





2.8 New contract



Key differences between old contracts and contracts renewed as of 2015



New contract



Parcel B adjustment in RTA

IGP-M (-) X Factor IPCA (-) X Factor



Parcel A Neutrality Only for sector charges

Includes energy purchase and transmission charges



Irrecoverable Revenues Coverage

Comprises parcel B

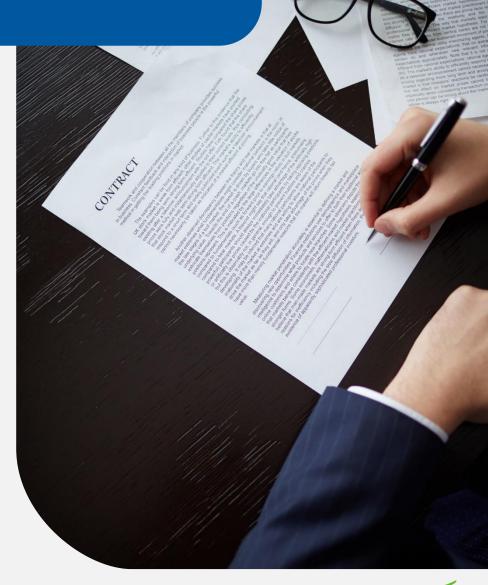
Comprises parcel A



Quality and economic- financial KPIs

Applied as of 2022

Transition rule from 2016 to 2021





Sector charges and transmission



Sector charges

Energy Development Account (CDE)

System Service Charge (ESS)

Incentive Program for Alternative Sources (PROINFA)

Research and Development (R&D)

Electricity Service
Inspection Fee (TFSEE)

National System Operator Fee (ONS)



Transmission charges

Use of Basic Network Installations (TUST)

Itaipu Transport

Use of the Distribution System (TUSD)

Connection Charges



CVA and Neutrality: mechanisms for transferring Parcel A costs to the consumer

When actual **energy sales** and **Parcel A** expenses are different from the amounts approved by Aneel, we account for regulatory assets/liabilities:

CVA

Offset diferences between actual and approved **PRICE**

Neutrality

Neutralize variations betweens actual and approved **ENERGY SALES** However, depending on the disco's **type of contract**, we may have parcel A impacts on results:

	Parcel A	CVA	Neutrality (old)	Neutrality (new)
Energy	Energy + Losses	✓	×	✓
	National Grid	✓	×	✓
Transmission	Connection	×	×	✓
Charges	Transmission	✓	×	✓
	TUSD	×	×	✓
	CDE	✓	✓	✓
	ESS/EER	✓	✓	✓
Sector	Proinfa	✓	✓	✓
Charges	TFSEE/ONS	×	✓	✓
	R&D	×	×	×

Energy Purchase and Transmission are economically neutral when: (i) Contracted energy is between 100% and 105% of demand; (ii) Energy Losses are within regulatory limits; and (iii) National Grid is between 90 and 110% of the demand



Aneel's Quality and economic-financial KPIs

Such contracts brought clauses for compliance with efficiency indicators related to the continuity of services and the Economic-Financial Management of discos.

These indicators are evaluated in two stages:

- Transition period (1st to 5th year of the contract)
- As of the 6th calendar year

As of the 6th year, a normative resolution was approved that provides for the indicators and penalties that will be imposed on all discos¹ in case of noncompliance (expiry process).

✓ Quality Indicator

internal SAIDI

internal SAIFI

√ Economic-financial Indicator

$$\frac{Net\ Debt}{EBITDA - QRR} \le \frac{1}{1.11 * SELIC}$$

✓ SELIC limits

Maximum: 9.009% p.y.

$$\frac{1}{1.11 * 9.009\%} = \frac{1}{10\%}$$

Leverage of **10.0x**

Minimum: 6.006% p.y.

$$\frac{1}{1.11 * 6.006\%} = \frac{1}{10\%}$$

Leverage of **15.0x**



Expiry process regulation

Frequency

Consequence

Indicator:

Internal SAIDI and internal SAIFI

3 consecutive years

2 consecutive years or 3 in 5 years

Any of the last 5 years of the contract

1 year

Opening of the expiry process

Limitation on dividends/IoE payment

Limitation on dividends/IoE payment

Results Plan

Indicator:

 $\frac{\textit{Net Debt}}{\textit{EBITDA} - \textit{QRR}} \leq \frac{1}{1.11 * \textit{SELIC}}$

2 consecutive years

1 year

Opening of the expiry process

Limitation on dividends/IoE payment and new contracts with related parties are forbidden¹



3. Taxes

Relevant attention points on that matter

- ✓ How PIS/Cofins is applied in Distribution segment
- ✓ What changed in ICMS tax rate with Law 194/22
- ✓ What affects income tax effective rate



Taxes over revenue | PIS, COFINS and ICMS

Ex: Energy bill





In this example we use a customer classified as Industrial A4 Green Tariff

	CRIMINAÇÃO DA OPERAÇÃ												
Cod.	Descrição da Operação	Mês	Quant.				Valor Total	Base Cálculo	Aliq.	ICMS	Base Cálculo	PIS	COFINS
115		Ref.	Registrada	Faturada	Med	Tributos R\$	Operação R\$	ICMS R\$	ICMS%		PIS/COFINS	0,88%	4,06%
0605	Consumo Ponta [KWh] - TUSD	SET/22	281,678	281,678	kWh	1,14236743	321,78				321,78	2,83	13,06
0605	Consumo Fora Ponta [KWh]-TUSD	SET/22	2.694,766	2.694,766	kWh	0,11692296	315,08		i		315,08	2,77	12,79
0601	Cons Ponta - TE	SET/22	281,678	281,678	kWh	0,58914748	165,95	165,95	18,00	29,87	136,08	1,20	5,52
0601	Cons FPonta TE	SET/22	2.694,766	2.694,766	kWh	0,36057677	971,67	971,67	18,00	174,90	796,77	7,01	32,35
0601	Consumo Reativo Exc Ponta	SET/22	84,156	84,156	KVr	0,37952919	31,94	31,94	18,00	5,75	26,19	0,23	1,06
0601	Consumo Reativo Exc Fora Ponta	SET/22	657,123	657,123	KVr	0,37960910	249,45	249,45	18,00	44,90	204,55	1,80	8,30
0602	Demanda [kW] - TUSD	SET/22	28,503	28,503	KW	16,30518679	464,75		1		464,75	4,09	18,87
0602	Demanda [kW] - TUSD	SET/22		1,496	KW	16,30144308	24,40		i		24,40	0,21	0,99
0602	Demanda Reat Exced [KW] -TUSD	SET/22		6,863	кw	16,30324710	111,89				111,89	0,98	4,54
	Subtotal						2.656,91				1		
	Total Distribuidora						2.656,91		ı		1	1	
0807	Contrib. Custeio IP-CIP Municipal	SET/22					10,02					ı	
	Total Devoluções/Ajustes						10,02						
	Total a Pagar						2.666,93						
Tota	l Consolidado						2.666,93	1.419,01		255,42	2.401,49	21,12	97,48

The energy tariff already includes taxes. In such a way that taxes (Pis/Cofins and ICMS) tend to be neutral in the result of Discos.

Tariffs defined by ANEEL are net of these taxes

TARIFA ANEEL					
kWh Ponta TE kWh Fponta TE kWh Ponta TUSD kWh FPonta TUSD kW Único	R\$ 0,45925000 R\$ 0,28107000 R\$ 1,08599000 R\$ 0,11115000 R\$ 15,50000000	kW Único Reat.kWh Ponta Reat.kWh FPonta Reativo kW	R\$ 15,50000000 R\$ 0,29592000 R\$ 0,29592000 R\$ 15,50000000		



Taxes over revenue | Law 194/2022

Ex: Energy bill



In this example we use a customer classified as Industrial A4 Green Tariff

DISCRIMINAÇÃO DA OPERAÇÃO - RESERVADO AO FISCO													
115	Descrição da Operação	Mês Ref.	Quant. Registrada	Quant. Faturada	Unid. Med.	Tarifa com Tributos R\$	Valor Total Operação R\$	Base Cálculo ICMS R\$	Aliq. ICMS%	ICMS	Base Cálculo PIS/COFINS	PIS 0,88%	COFINS 4,06%
0605	Consumo Ponta [KWh] - TUSD	SET/22	281,678	281,678	kWh	1,14236743	321,78				321,78	2,83	13,06
0605	Consumo Fora Ponta [KWh]-TUSD	SET/22	2.694,766	2.694,766	kWh	0,11692296	315,08	1			315,08	2,77	12,79
0601	Cons Ponta - TE	SET/22	281,678	281,678	kWh	0,58914748	165,95	165,95	18,00	29,87	136,08	1,20	5,52
0601	Cons FPonta TE	SET/22	2.694,766	2.694,766	kWh	0,36057677	971,67	971,67	18,00	174,90	796,77	7,01	32,35
0601	Consumo Reativo Exc Ponta	SET/22	84,156	84,156	KVr	0,37952919	31,94	31,94	18,00	5,75	26,19	0,23	1,06
0601	Consumo Reativo Exc Fora Ponta	SET/22	657,123	657,123	KVr	0,37960910	249,45	249,45	18,00	44,90	204,55	1,80	8,30
0602	Demanda [kW] - TUSD	SET/22	28,503	28,503	KW	16,30518679	464,75				464,75	4,09	18,87
0602	Demanda [kW] - TUSD	SET/22		1,496	KW	16,30144308	24,40	1		1	24,40	0,21	0,99
0602	Demanda Reat Exced [KW] -TUSD	SET/22		6,863	KW	16,30324710	111,89	1			111,89	0,98	4,54
	Subtotal						2.656,91	1		- 1			
	Total Distribuidora						2.656,91	i e		1			
0807	Contrib. Custeio IP-CIP Municipal	SET/22					10,02			1			
	Total Devoluções/Ajustes						10,02	1					
	Total a Pagar						2.666,93	<u> </u>		_'			
Tota	al Consolidado						2.666,93	1.419,01		255,42	2.401,49	21,12	97,48

LAW 194/2022:

- Non-incidence of ICMS over transmission and distribution services and sector charges linked to electricity operations
- Rate limited to 18% in SP and 17% in RS (please check each state)



Taxes | Income Tax

Main rationale to include income tax in your model:

- Evaluate each company's tax regime
- Main additions and exclusions specific to discos:
 - Excess Demand / Reactive Power
- +
- Refers to the portion of measured demand that exceeds the amount of demand contracted by the consumer.
- This revenue and taxes will be considered for tariff reduction.
- Restatement of Concession Financial Asset
 - Temporary exclusion of the restatement of the financial asset in the income tax calculation base
 - Realization of the deferred liability occurs after the end/renewal of the concession





4.1 X Factor



Productivity is expected in the concession contract, is defined by ANEEL and directly impacts Parcel B in discos' tariff revisions¹

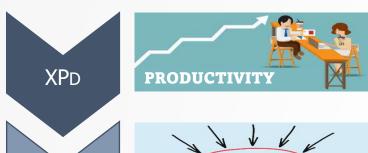


XQ

X Factor

X Factor Components

Productivity, Quality and Cost Trajectory



PD Component: Ratio between the evolution of **outputs** (billed energy) and the variation of **inputs** (sum of operating costs and CAPEX remuneration).



Q Component: Annual variation of the calculated indicators SAIDI, SAIFI, FER, IASC, QUALCOM, INAB and INCO. Defined in each RTA and can vary from + 2% to - 2%.



T Component: Trajectory of operating costs between the first and last year of the disco's tariff cycle.



X Factor = XPD + XQ + XT

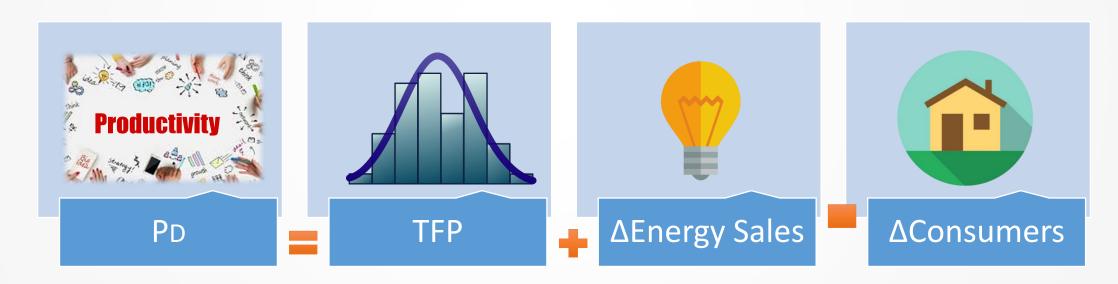
Productivity is directly proportional to energy sales (MWh) and inversely proportional to the number of consumer units



Productivity Concept

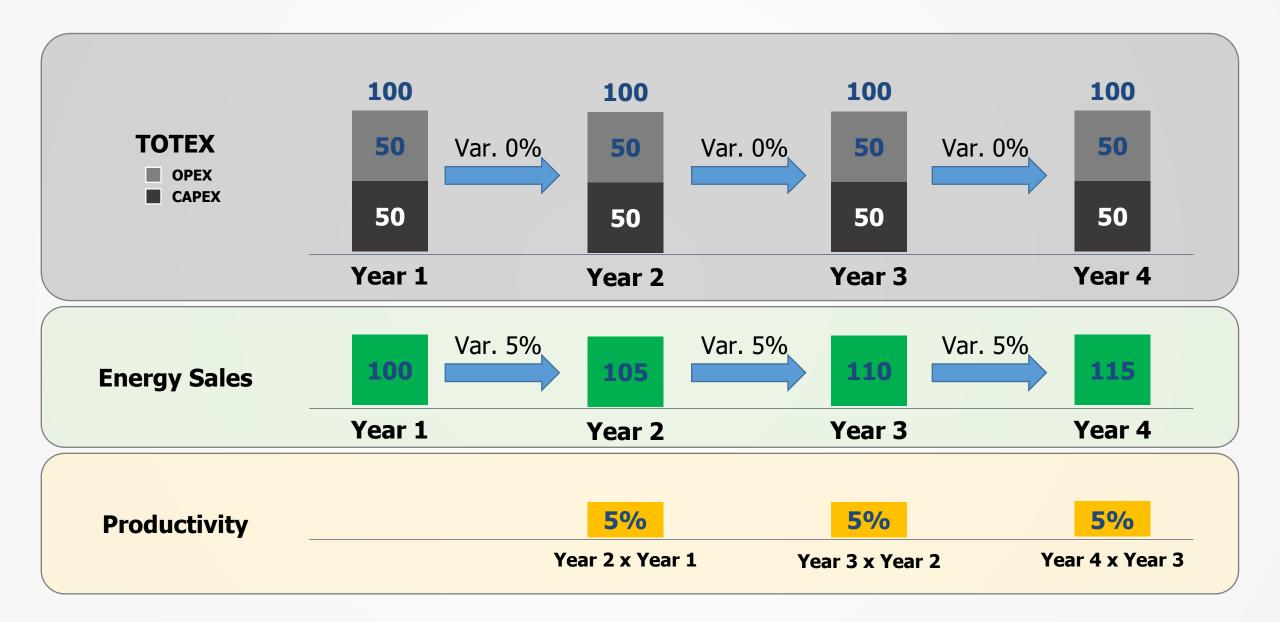
Relation input/output

It is related to the relation between inputs and outputs: $\frac{\mathbf{Productivity}}{\mathbf{Input}}$



$$Pd = PTF + 0.317 \cdot (\Delta MWh(i) - \overline{\Delta MWh})$$

The productivity of discos is influenced by the annual variation of inputs (TOTEX) and outputs (Energy Sales)



4.2 Regulatory Assets & Liabilities



Regulatory assets and liabilities — CVA, financial components and others

- 1 Parcel A variation account (CVA)
- **2** CVA of the previous year
- **3** Sector Charges Neutrality
- 4 Over contracting
- 5 Financial components
- 6 Others





Others: tariff flags, PIS/Cofins over ICMS etc.

6

Financial components:

items added to tariffs to pass through the costs incurred by the discos in previous years





CVA balance: the sum of the differences between the value approved on the tariff adjustment and the actual value, updated by SELIC rate

Example: Itaipu Dollar.



Neutrality: offsets the differences between the volume approved on the tariff adjustment and actual volumes



Overcontracting: involuntary energy purchase allowed to pass through to consumers



Regulatory Assets & Liabilities

Example – CPFL Piratininga 2Q22 Financial Statement (Portuguese only)

(7) ATIVO E PASSIVO FINANCEIRO SETORIAL

A composição dos saldos e a movimentação do período do ativo e passivo financeiro setorial são como segue:

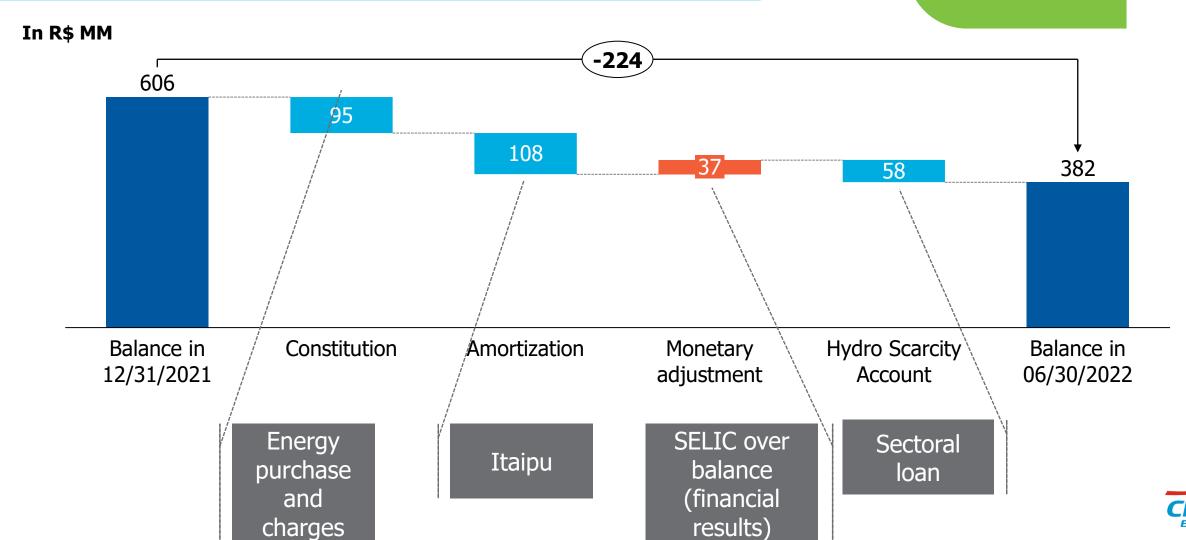
		Resultado f				Resultado financeiro	eiro				
	Saldo em 31/12/2021			Receita operacional (nota 17)		(nota 20)	Recebimento	Saldo em 30/06/2022			
	Diferido	Homologado	Total	Constituição	Realização	Atualização monetária	Conta de escassez hídrica	Diferido	Homologado	Total	
Parcela "A"	346.377	322.470	668.847	(156.176)	(171.183)	35.334	(58.426)	144.546	173.851	318.397	
CVA (*)											
CDE (**)	(10.503)	558	(9.945)	194.405	(154)	5.168	-	188.864	609	189.473	
Custos energia elétrica	(31.946)	(35.280)	(67.227)	(381.302)	27.395	(8.295)	(18.167)	(442.859)	(4.736)	(447.595)	
ESS e EER (***)	234.775	87.441	322.215	(272.726)	(50.188)	10.865	(40.259)	(70.818)	40.726	(30.092)	
Proinfa	-	12.186	12.186	38.643	(7.353)	1.861	-	40.060	5.276	45.336	
Rede básica	(703)	45.878	45.175	12.869	(26.728)	2.021	-	12.305	21.032	33.337	
Repasse de Itaipu	197.299	283.894	481.193	20.563	(160.513)	22.904	-	227.548	136.599	364.147	
Transporte de Itaipu	322	4.745	5.067	2.213	(2.718)	213	-	2.557	2.219	4.775	
Neutralidade dos encargos setoriais	(10.741)	(40.378)	(51.118)	(13.973)	25.752	(548)	-	(25.262)	(14.626)	(39.888)	
Sobrecontratação	(32.126)	(36.573)	(68.699)	243.222	23.325	1.144	-	212.240	(13.248)	198.992	
Bandeira Tarifária Faturada	-	-	-	(90)	-	-	-	(90)	-	(90)	
Outros componentes financeiros	(3.475)	(59.277)	(62.752)	61.485	63.165	1.919	-	131.437	(67.619)	63.817	
Total	342.902	263.193	606.095	(94.691)	(108.018)	37.253	(58.426)	275.982	106.232	382.214	



Regulatory Assets & Liabilities

Example – CPFL Piratininga 2Q22 Financial Statement

The balance variation is accounted for in **Operational Revenue**

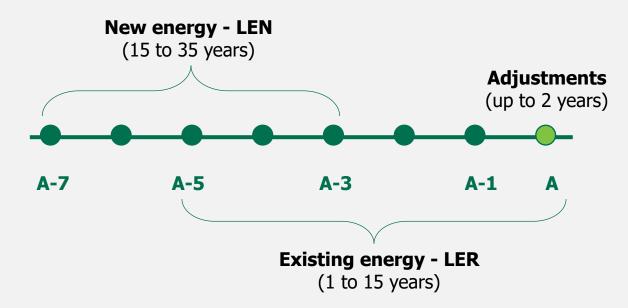


4.3 Overcontracting



Overcontracting – what is it?

Auction types





LFA – Alternative Sources LER – Reserve Energy



Bilateral Contracts



Itaipu Quotas Angra Quotas Law 12,783/13 Quotas happens when the amount of contracted energy is higher than the disco's energy needs (captive market + losses)

Law 10.848/04 and later

(free translation)



Art. 2 Concessionaires, permit holders and authorized public service providers of electric energy distribution of the National Interconnected System - SIN must guarantee the full service of their energy market, through regulated cting in auctions, according to regulation

contracting, in auctions, according to regulation
(...)

II - for electricity from **existing generation projects**, delivery will begin **in the same year or up to the fifth year** following the bidding year, with a supply period of at least 1 (one) and a maximum of 15 (fifteen) years;

III - for electricity from **new generation projects**, delivery will start from the **third to the seventh year** following the bidding, with a supply period of at least 15 (fifteen) and a maximum of 35 (thirty-five) years.

...)

§ 3° Except for the provisions of § 2° of this article, bids for the discos' purchase for adjustments, in percentages to be defined by the Granting Authority, which may not exceed 5% (five percent) of their loads, whose maximum term of supply will be 2 (two) years.

Overcontracting – what is it?



Regulation allows **up to 105%** to be passed on in the tariff.

- If energy contracts exceed 105%, there may be:
 - ✓ Voluntary overcontracting: due to the disco's contracting strategy, which assumes the spot price (PLD) risk
 - ✓ **Involuntary overcontracting:** due to the quotas of Law 12,783/13, the migration of free and special customers to the free market and the expansion of Distributed Generation
- If energy contracts reach less than 100%, the disco must purchase energy in the short-term market (PLD risk) and will pay a subcontracting penalty

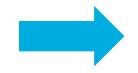


Overcontracting – how to know if a disco is overcontracted?

Example – RGE's 2022 RTA – SPARTA/ANEEL Excel file

In "Energia" spreadsheet:

Tipo	Montante contratado	Montante Req sem proir
Geral	15.164.221 MWh	14.530.694 MWh



104.4%

Energia Contratada (Sem considerar o PROINFA): determinar o custo médio do Mix

Empresa	Montante		Custo médio	
Energia Base	7.278.570	MWh		
Geração Própria	-	MWh		
Cota Angra I/Angra II	545.489	MWh		349,15
Cotas Lei n º 12783/2013	3.490.942	MWh		122,65
Itaipu (tirando as perdas)	3.242.138	3 MWh		281,21
Bilateral	-	MWh		<u> </u>
CCEAR	7.885.651	. MWh		257,94
Custo Mix (sem proinfa)				235,05
Despesa Final	14.530.694	MWh		



In order to download SPARTA Excel file, access:

https://www2.aneel.gov.br/aplicacoes_liferay/tarifa/



4.4 Overdue bills



Overdue bills – Late payment interest and fines

Late payment interest and fines

- Monetary restatement IPCA
- 2 Fine 2%
- 3 Interest 1% p.m. (*Pro rata die*)

As of 3Q22, CPFL Energia began disclosing a Management Analysis of the Financial Result in its earnings release, which includes, among other items, revenues/expenses related to overdue bills: late payment fines, monetary restatement, financing and negotiations.

Managerial Analysis

	Financial Result (R\$ Million)						
		3Q22	3Q21	Var.	9M22	9M21	Var.
_	Expenses with the net debt	(424)	(272)	55.7%	(1,511)	(641)	135.6%
$(\]$	Late payment interest and fines	108	123	-12.4%	370	429	-13.8%
Adj	Mark-to-market	1	(31)		13	(14)	-
	Adjustment to the sectoral financial asset/liability	74	35	108.7%	298	48	525.0%
	Other financial revenues/expenses	(16)	2	-	(83)	(55)	49.5%
	Financial Result	(258)	(142)	81.1%	(913)	(233)	291.7%

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Key takeaways

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The new concession contract (concessions renewed from 2015 onwards) eliminates the effects of Parcel A, in addition to replacing the IGP-M with the IPCA in the adjustment of Parcel B





PIS/Cofins, mostly, and ICMS are neutral for the results.

Effective IR/CS rate tends to be higher than 34% due to the inclusion of amounts for excess demand and reactive power

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Other importante point for the understanding of a disco's performance:

- ✓ X Factor
- ✓ Balance of regulatory assets & liabilities
- ✓ Overcontracting
- ✓ Late payment interest and fines





