Tractebel Energia
GDF SUEZ

Electricity Market and Regulatory Outlook



March, 2010

Electricity Market in Brazil

Current Regulatory Framework

- Generation
  - Competition between generator (state-owned and privately-owned)
    - All generators can sell electricity in captive market or free market
    - State-owned generators must have a transparent negotiation process
  - Regulated Market (auctions) are divided into new energy or old energy auctions
  - Generator can sell up to 100% of its Assured Energy
- Free Customers
  - Demand ≥ 3 MW
  - 100% of consumption must be contracted
  - Payment of transmission tariff ("wire")
- Distribution
  - Electricity must be contracted through Regulated Market (ACR Auctions)
  - 100% of consumption must be contracted
  - Distributors can sell electricity only to captive consumers
  - Distributors can provide services (wire usage) to captive consumers, free customers and other generators
- Transmission
  - Can provide services (wire usage) to free customers and other generators

Current Regulatory Framework

- "New Energy" Auctions
  - Start-up of electricity delivery to grid: 3rd or 5th year after bidding (A-3 and A-5 auctions)
  - Term of Supply-contract: 15 years (minimum) to 35 years (maximum)
  - "New energy" addresses market growth

- "Existing Energy" Auctions
  - Start-up of electricity delivery to grid: 1 year after bidding (A-1 auction)
  - Term of Supply-contract: 3 years (minimum) to 15 years (maximum)
  - "Existing Energy" can not address market growth

Current Regulatory Framework

- Adjust Auctions
  - Start-up of electricity delivery to grid: up to 4 months after bidding (A)
  - Term of Supply-contract: up to 2 years (maximum)
  - Applicable for "existing energy"

- Alternative Sources Auctions
  - Start-up of electricity delivery to grid: between 1 and 5 years after bidding (A-1 to A-5)
  - Term of Supply-contract: 10 years (minimum) to 30 years (maximum)
  - Applicable for "new energy" or "existing energy"
  - Constitutes a reserve for distributors

- Backup/Reserve Auctions
  - Mandatory contracts in both regulated and free market auctions
  - Start-up of electricity delivery to grid: between 1 and 5 years after bidding (A-1 to A-5)
  - Term of Supply-contract: up to 35 years (maximum)
  - Applicable for "new energy" or "existing energy"
  - "Backup/Reserve Auctions" do not serve as a backup/reserve for distributors
    - Aim to improve electricity's system reliability

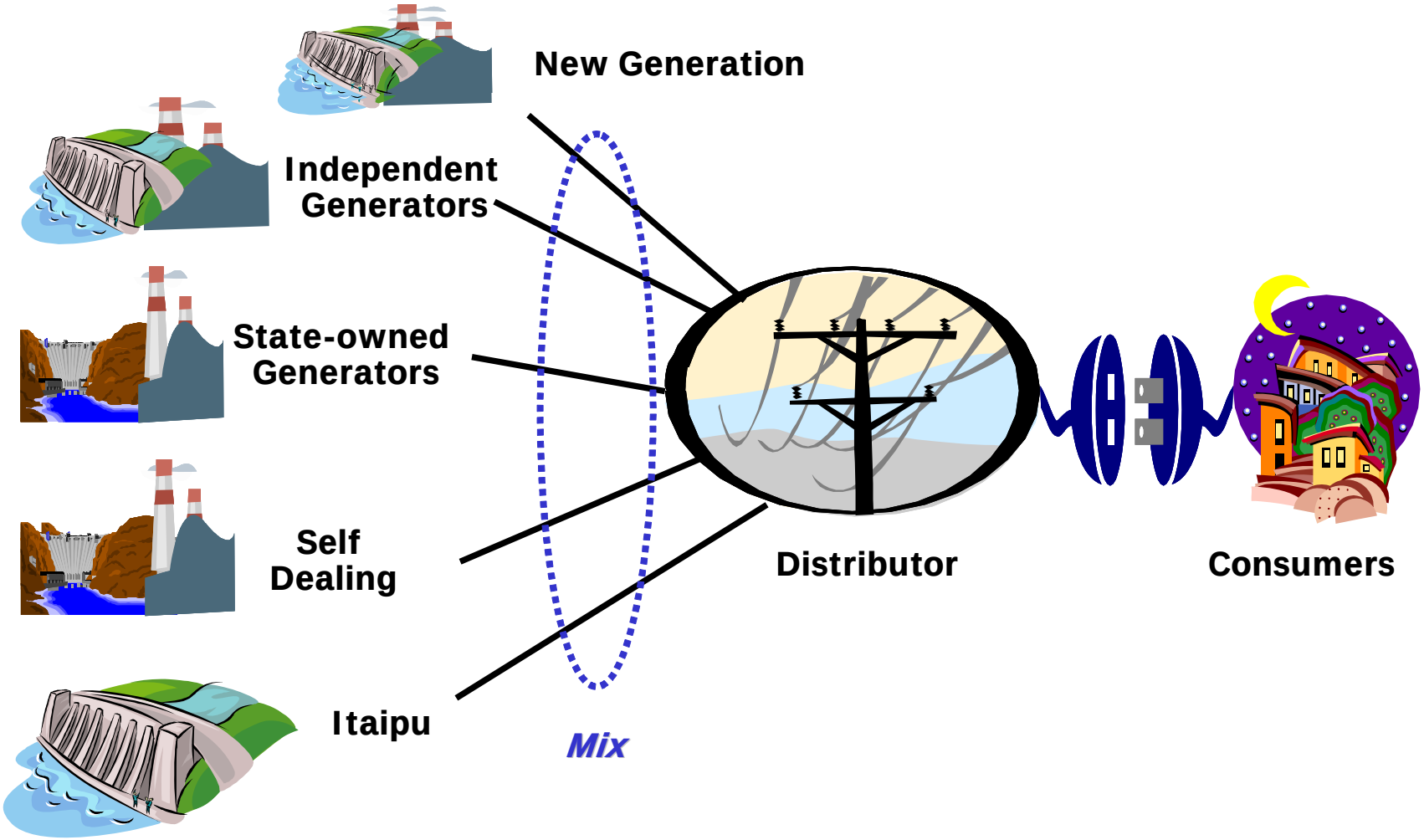
Tractebel's Participation in Auctions

Auction	Date	Volume (Avg MW médios)	Avg Price (R$/MWh)	Total contract revenue [R$ Million]	Total volume Of auction [Avg MW]	Avg Price Of auction (R$/MWh)	Share (%)
1st EEA Product 2005 8 years	Dec/04	-	-	-	9,054.00	73.45	0.0%
1st EEA Product 2006 8 years	Dec/04	-	-	-	6,782.00	86.00	0.0%
1st EEA Product 2007 8 years	Dec/04	10.00	90.54	63.49	1,172.00	96.37	0.9%
2nd EEA Product 2008 8 years	Apr/05	150.00	101.44	1,067.09	1,325.00	103.41	11.3%
3rd EEA Product 2006 3 years	Oct/05	-	-	-	102.00	76.77	0.0%
4th EEA Product 2009 8 years	Oct/05	381.00	114.62	3,062.56	1,166.00	115.75	32.7%
5th EEA Product 2007 8 years	Dec/06	-	-	-	204.00	122.72	0.0%
8th EEA Product 2009 5 years	Oct/09	-	-	-	84.00	101.21	0.0%
1st NEA Product 2008 H 30 years	Dec/05	-	-	-	71.00	129.25	0.0%
1st NEA Product 2008 T 15 years	Dec/05	-	-	-	561.00	159.83	0.0%
1st NEA Product 2009 H 30 years	Dec/05	-	-	-	46.00	138.10	0.0%
1st NEA Product 2009 T 15 years	Dec/05	-	-	-	587.00	155.92	0.0%
1st NEA Product 2010 H 30 years	Dec/05	200.00	139.10	7.315.57	889.00	139.02	22.5%
1st NEA Product 2010 T 15 years	Dec/05	-	-	-	862.00	147.21	0.0%
2nd NEA Product 2009 H 30 years	Jun/06	493.00	152.75	19,803.22	1,028.00	150.87	48.0%
2nd NEA Product 2009 T 15 years	Oct/06	-	-	-	528.00	159.77	0.0%
3rd NEA Product 2011 H 30 years	Oct/06	148.00	159.44	6,205.72	569.00	142.73	26.0%
3rd NEA Product 2011 T 15 years	Oct/06	-	-	-	535.00	162.31	0.0%
4th NEA Product 2010 T 15 years	Jun/07	-	-	-	1,304.00	154.58	0.0%
5th NEA Product 2012 H 30 years	Sep/07	256.00	143.99	9,694.42	715.00	146.92	35.8%
5th NEA Product 2012 T 15 years	Sep/07	-	-	-	1,597.00	146.04	0.0%
6th NEA Product 2012 H 30 years	Nov/07	-	-	-	1,552.60	89.12	0.0%
7th NEA Product 2013 H 30 years	Apr/08	692.74	78.42	14,286.38	1,382.71	78.42	50.1%
8th NEA Product 2011 T 15 years	Aug/08	-	-	-	1,076.00	137.86	0.0%
9th NEA Product 2013 H 30 years	Aug/08	-	-	-	121.00	106.26	0.0%
9th NEA Product 2013 T 15 years	Aug/08	-	-	-	3,004.00	155.90	0.0%
10th NEA Product 2013 H 30 years	Aug/09	-	-	-	1.00	144.35	0.0%
10th NEA Product 2013 T 15 years	Aug/09	-	-	-	10.00	144.95	0.0%
1st ASC Product 2010 H 30 years	Jun/07	-	-	-	46.00	154.95	0.0%
1st ASC Product 2010 T 15 years	Jun/07	-	-	-	140.00	159.38	0.0%
Total		**2,330.74**	**119.15**	**61,498.45**	**36,514.31**	**108.90**	**6.4%**

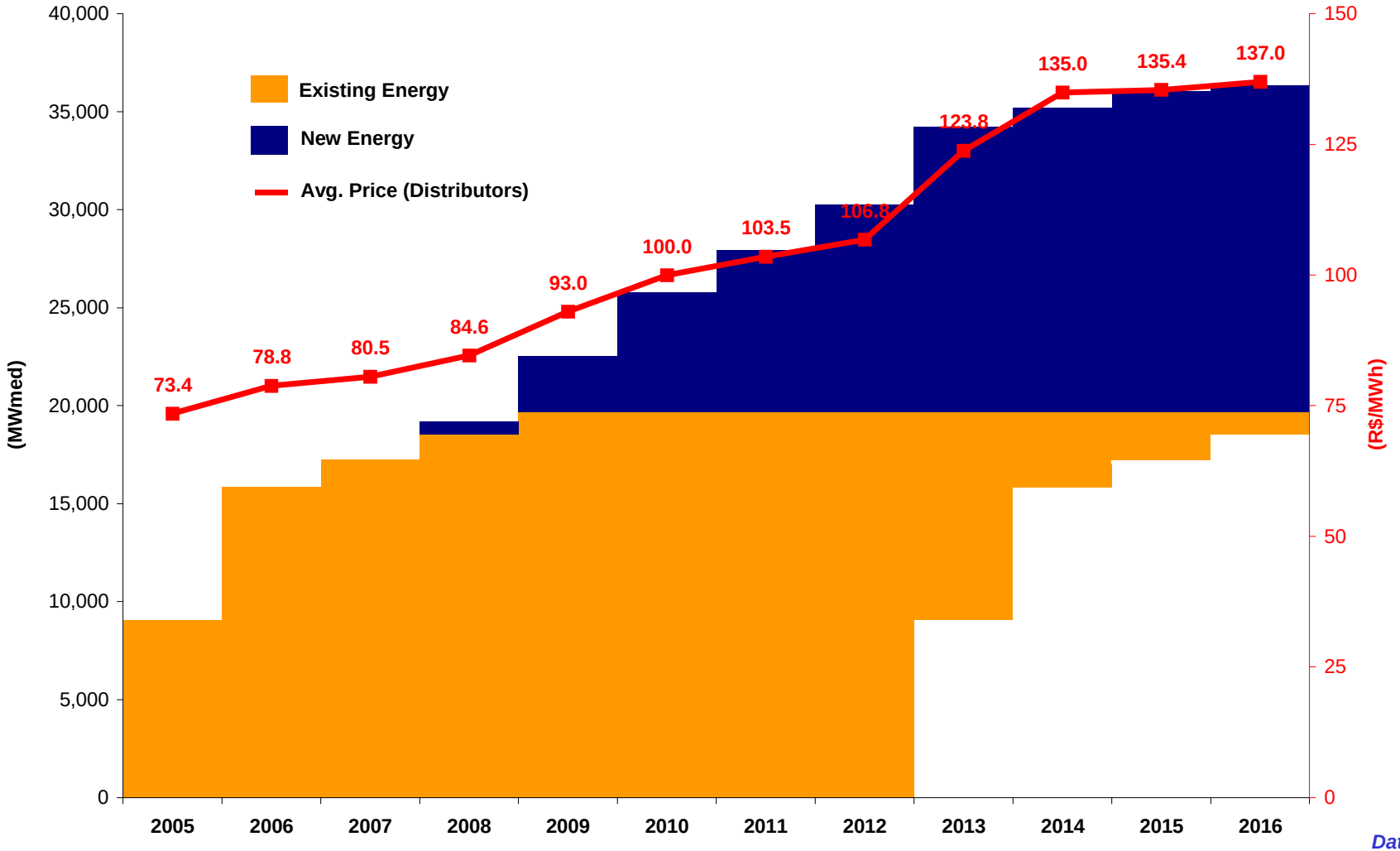
EEA = Existing Energy Auction
NEA = New Energy Auction
ASC = Alternative Sources Auctions

Data as of Feb/2010

Fundamentals of Electricity Tariff

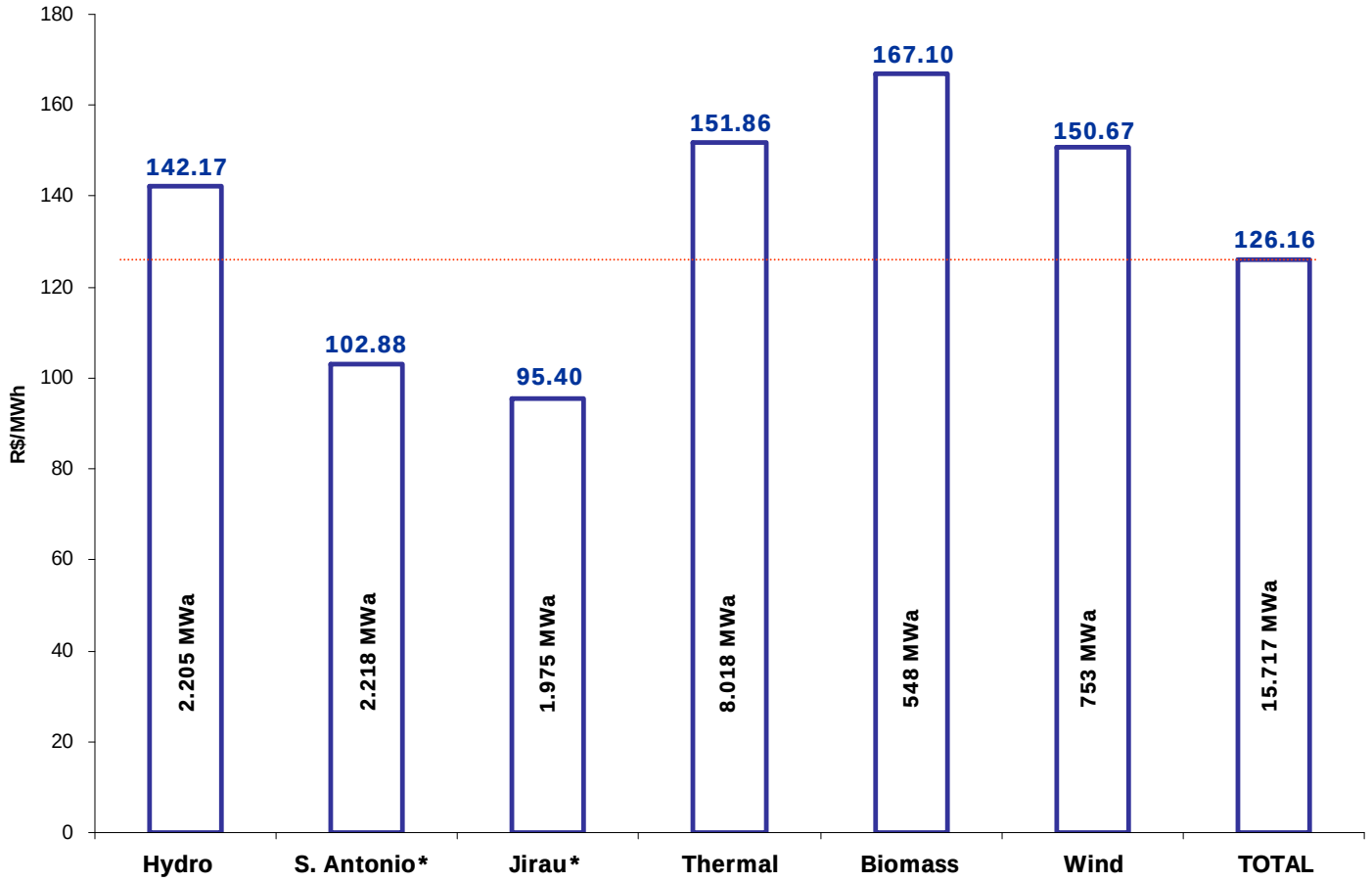


Average Price in Regulated Market (Auctions)



Data as of Feb/2010

Average Price – New Energy (by Source)

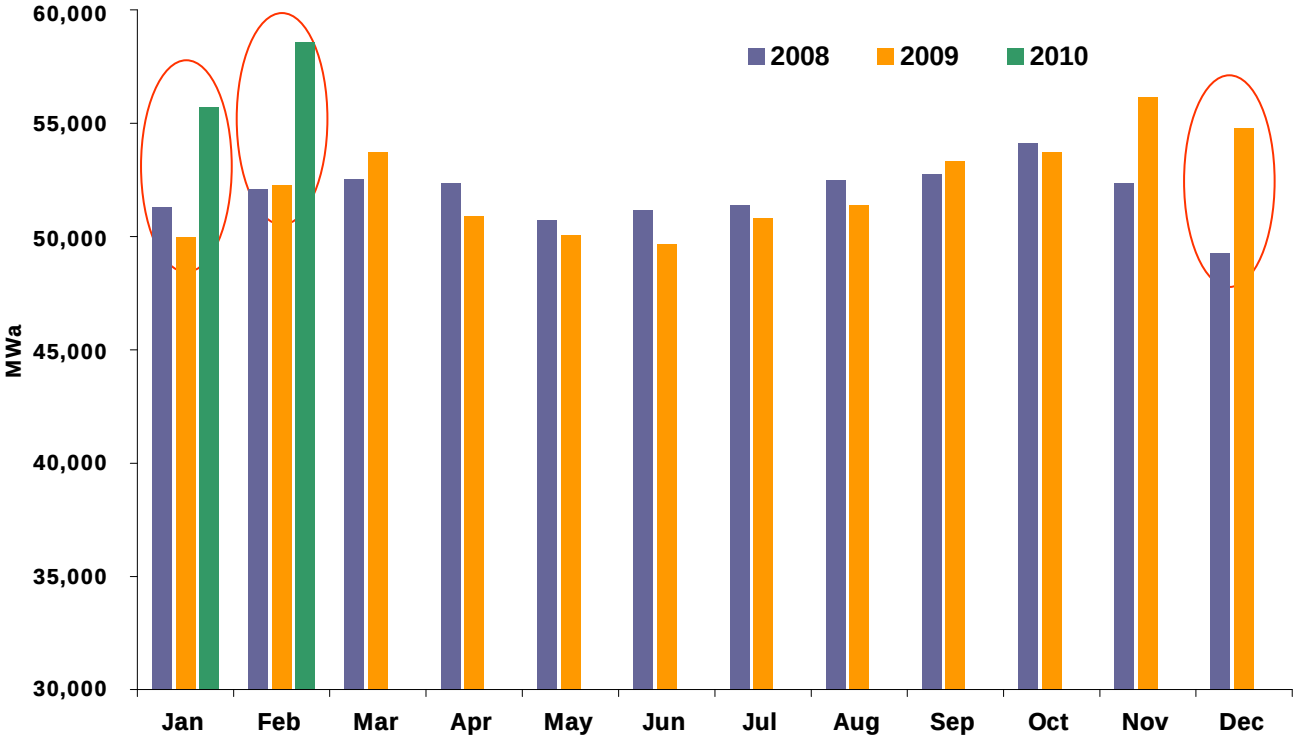


* Considers 30% of sales in Free Market (@ R$ 135/MWh)

Data as of Feb/2010

Scenarios for Electricity Supply and Demand

Quick Recovery in Electricity Demand



National System (SIN) Demand*:

2009 / 2008: +0.7%

Dec-2009 / Dec-2008: +11.2%

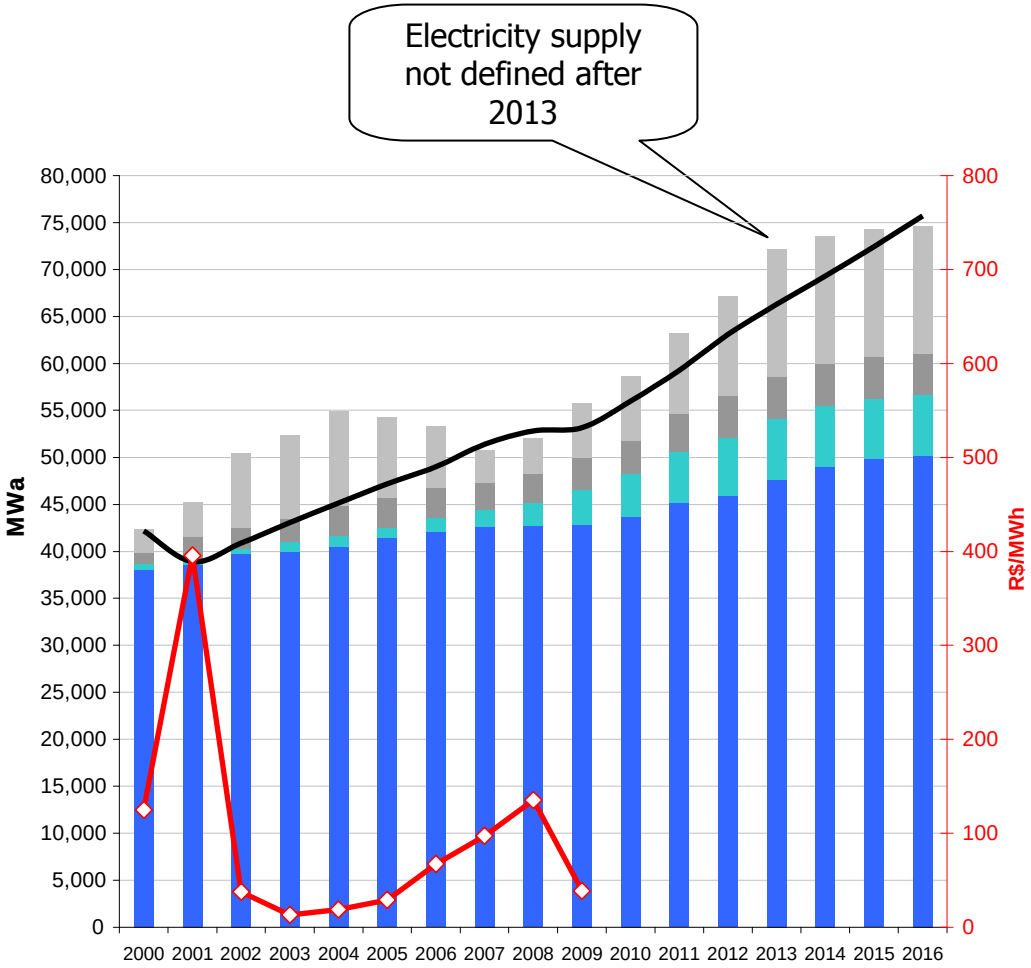
Jan-2010 / Jan-2009: +11.4%

Feb-2010 / Feb-2009: +12.1%

** Including electricity losses*

Source: ONS

Electricity Supply-Demand Balance



National System (SIN) Demand*:

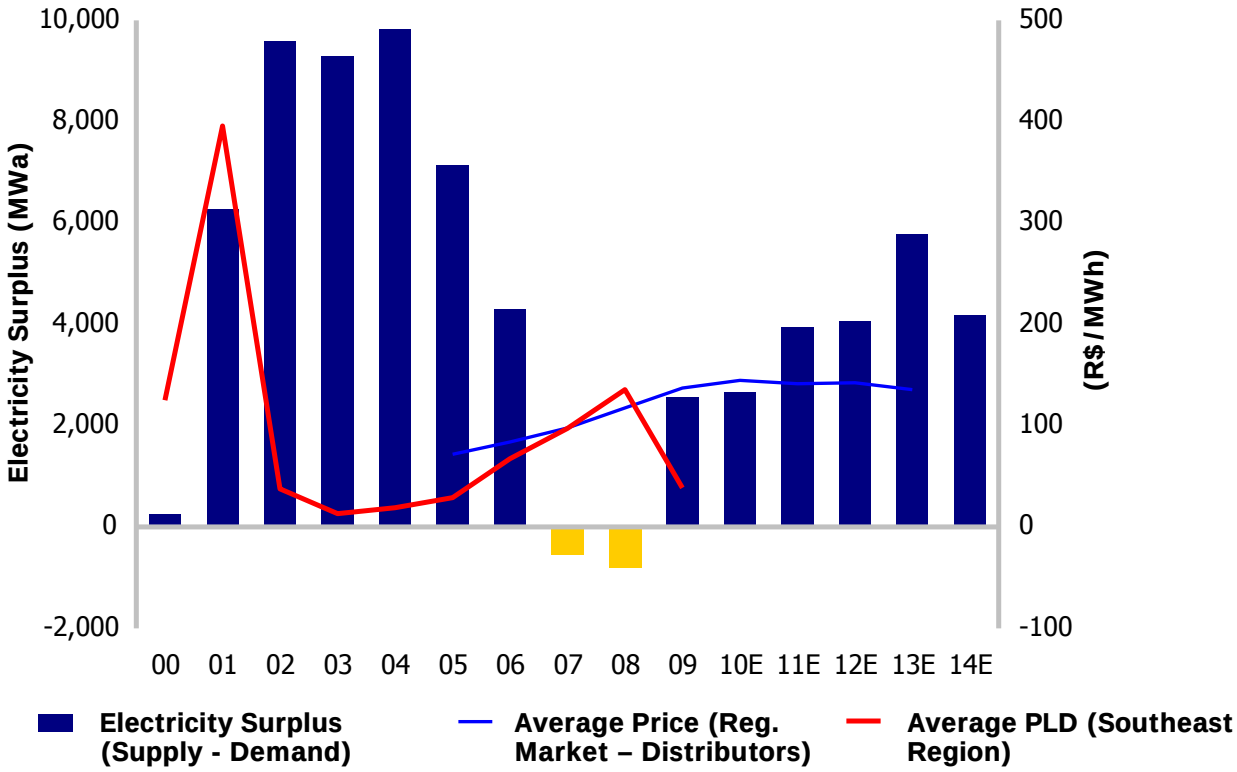
2010	2011	2012	2013	2014	2010-2014
6.5%	4.4%	4.9%	6.9%	4.5%	5.4%

** Including electricity losses*
Manaus connected to the system in 2013 (demand increase of +2.0% in 2013 and +0.3% in 2010-2014)

Source: ONS

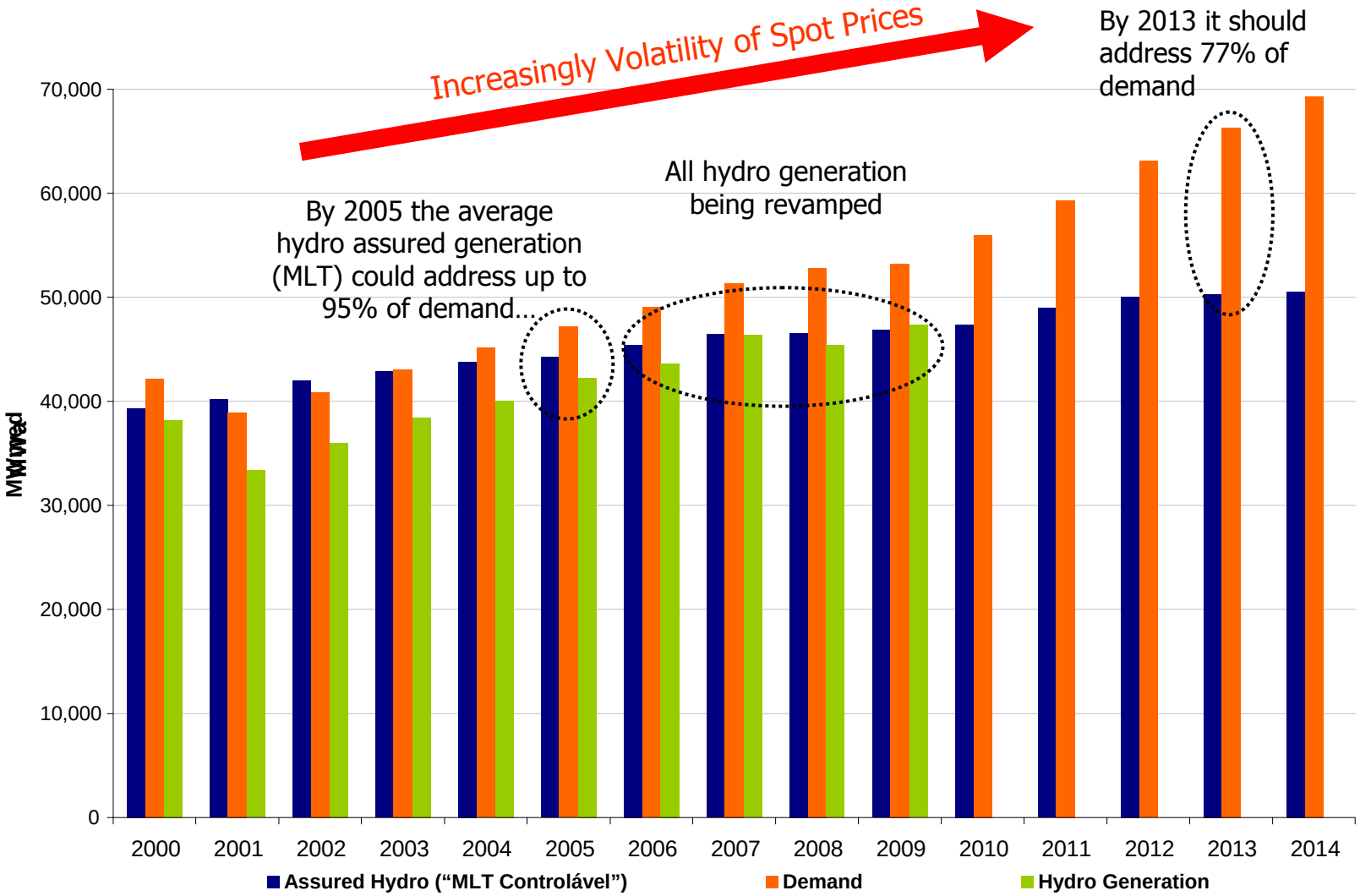
Medium-Term Supply. Demand and Price Outlook

Results of latest auctions and market slowdown created an electricity surplus for the next years. However, an upward price trend is forecasted due to increasingly participation of "new energy" in auctions

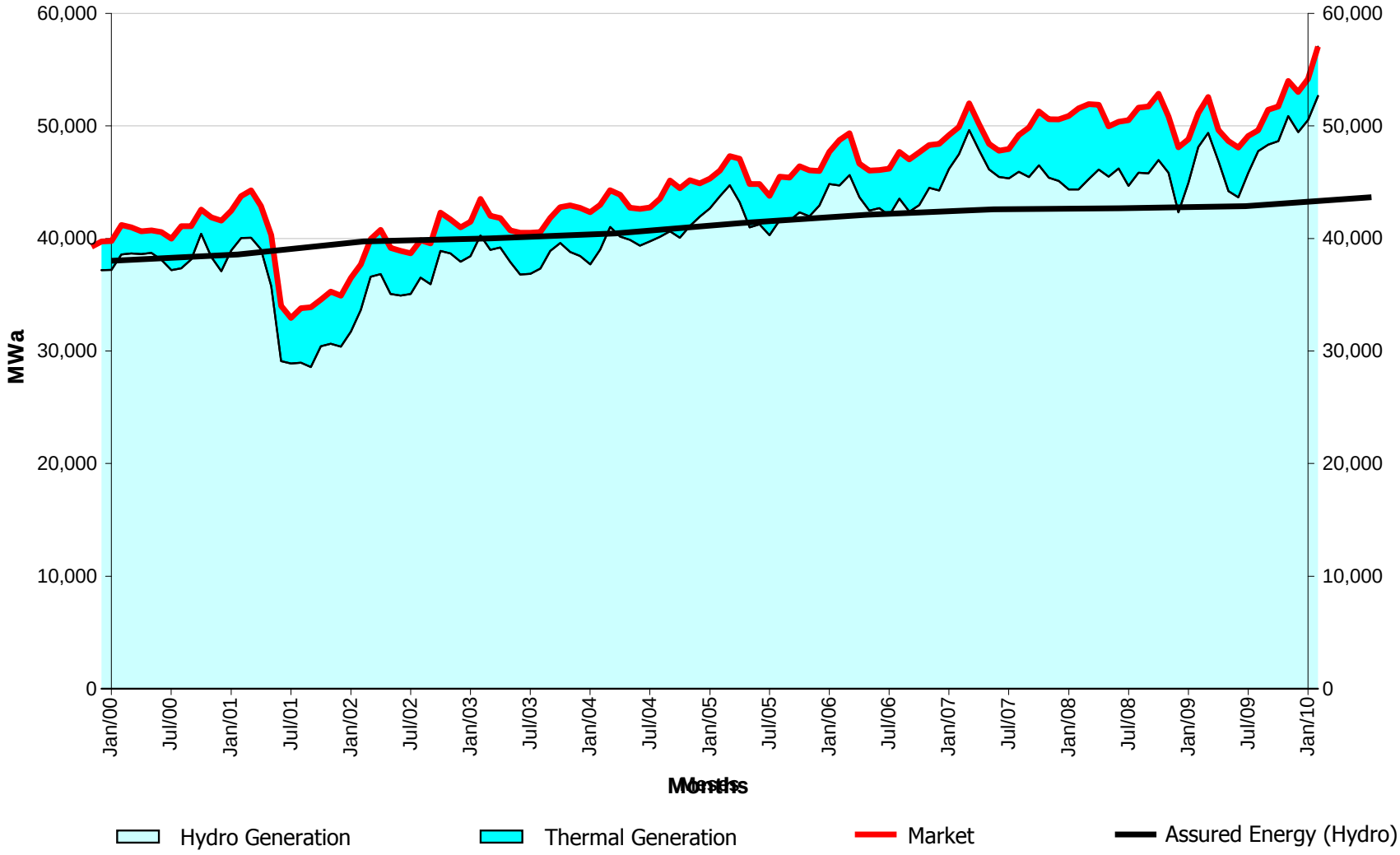


Source: Tractebel (internal study based on Monthly Operating Plan (PMO) – Feb/2010)

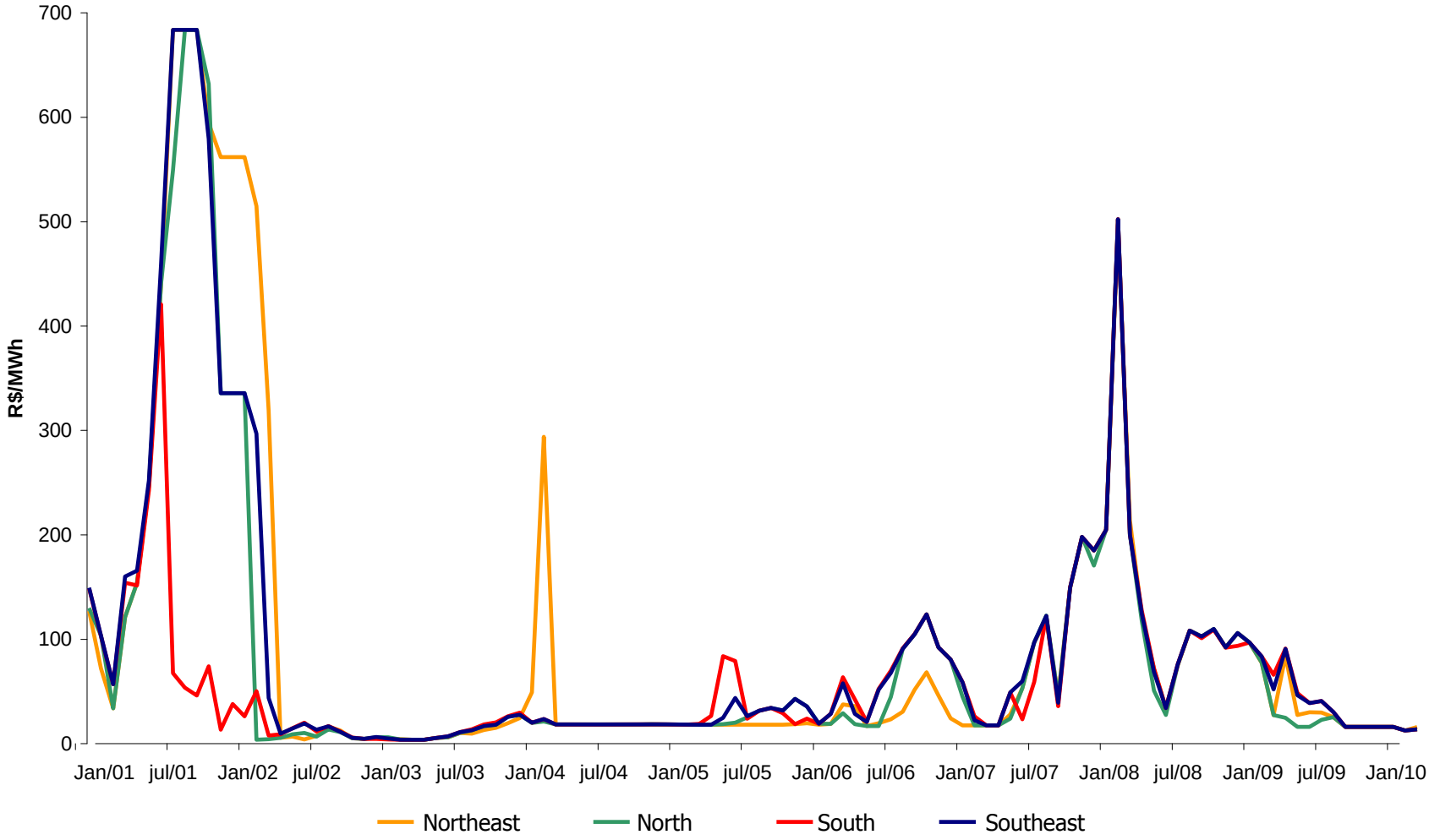
Hydro Demand and Supply



Increase in Secondary Electricity



PLD – Price for Settlement of Differences *(Spot Price)*

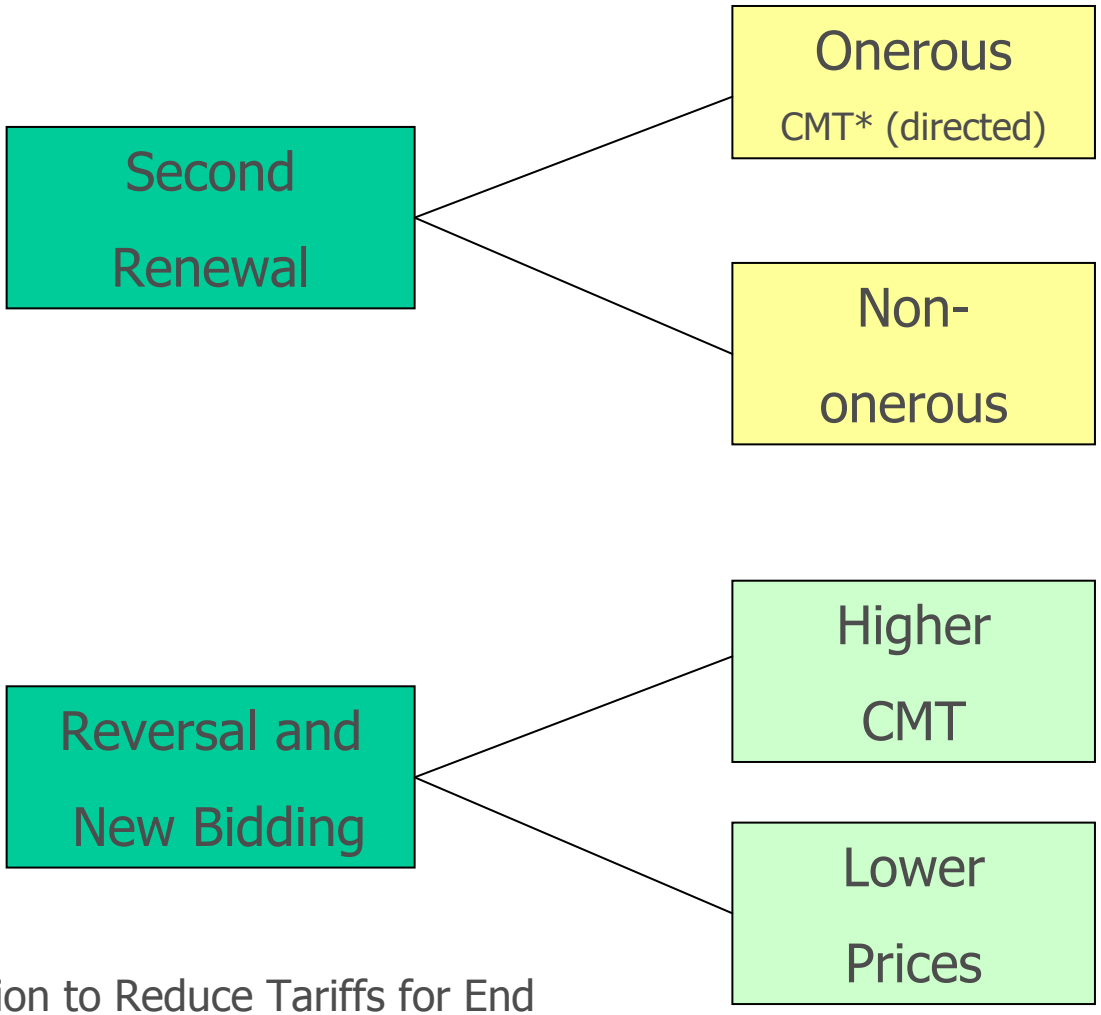


Concession Expiry

- Complex issue, with major impacts in the Brazilian electricity sector
- Evaluating the Problem
  - Generation: Nearly 20% (21,792 MW) of installed capacity in Brazil have concessions expiring in 2015, with legal barriers to renewal or extension
  - After 2013, electricity contracts must be renewed in the Regulated Market (ACR)
    - 9,000 MWa in 2013
    - 6,800 MWa in 2014
    - 1,300 MWa in 2015
- Current regulatory framework supports the existence of Regulated and Free Market (Law 9074/95)
  - The definition of both markets assumes existance of elements and conditions ensuring coexistance of Regulated and Free Markets
  - A solution for concession renewal should guarantee the existance of Free Market (ACL), which is paramount for independent producers and free customers' activities
    - The Free Market (ACL) is price-sensitive, and contributes to the rationalization in the use of resources

Problem solving requires broad decisions in a timely manner

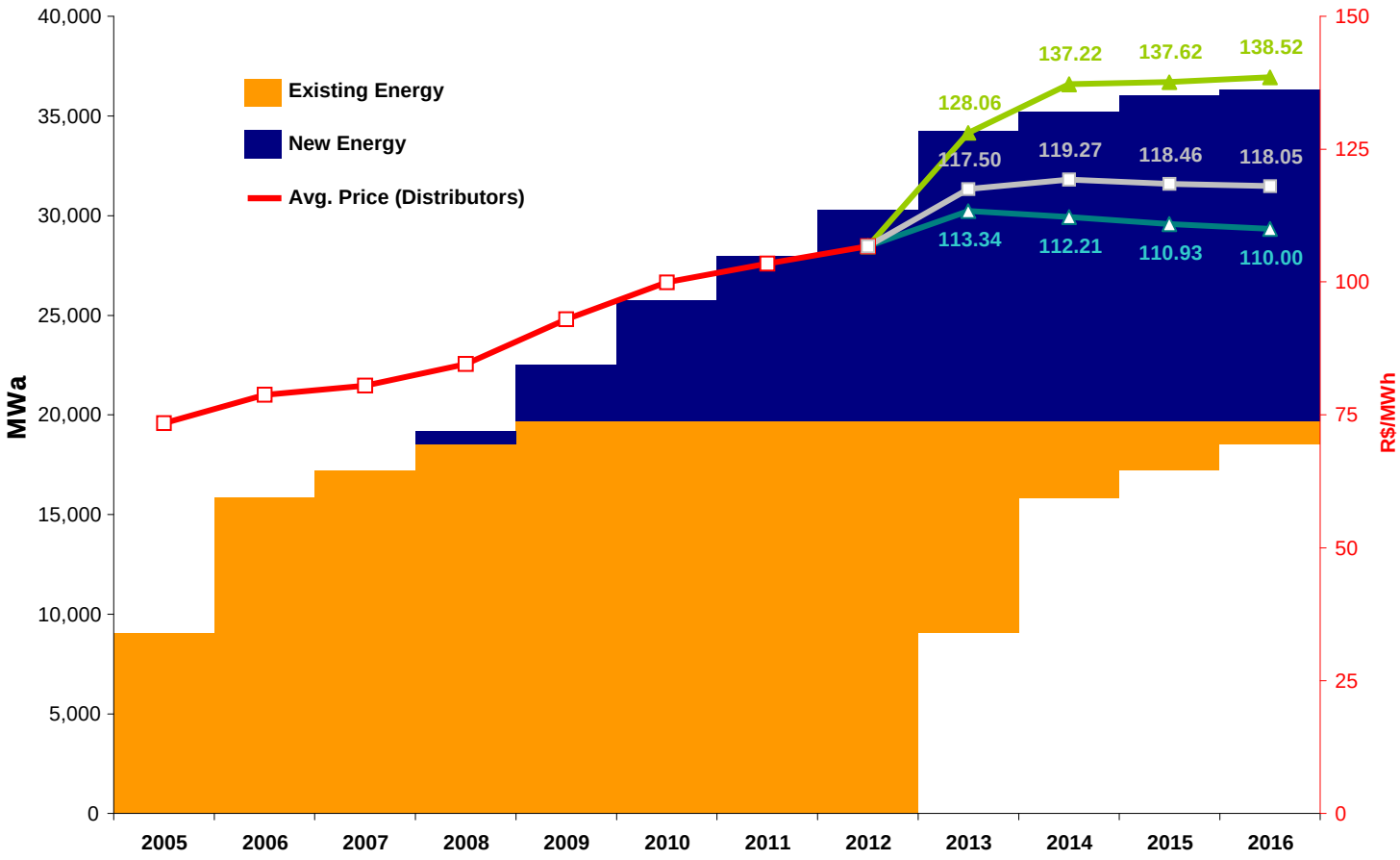
Approaches for Concession Expiry



CMT* – Contribution to Reduce Tariffs for End Users

Source: APINE

Impact in Electricity Tariffs



Renewal @ R$ 140/MWh

(proxy of Marginal Cost of Expansion)

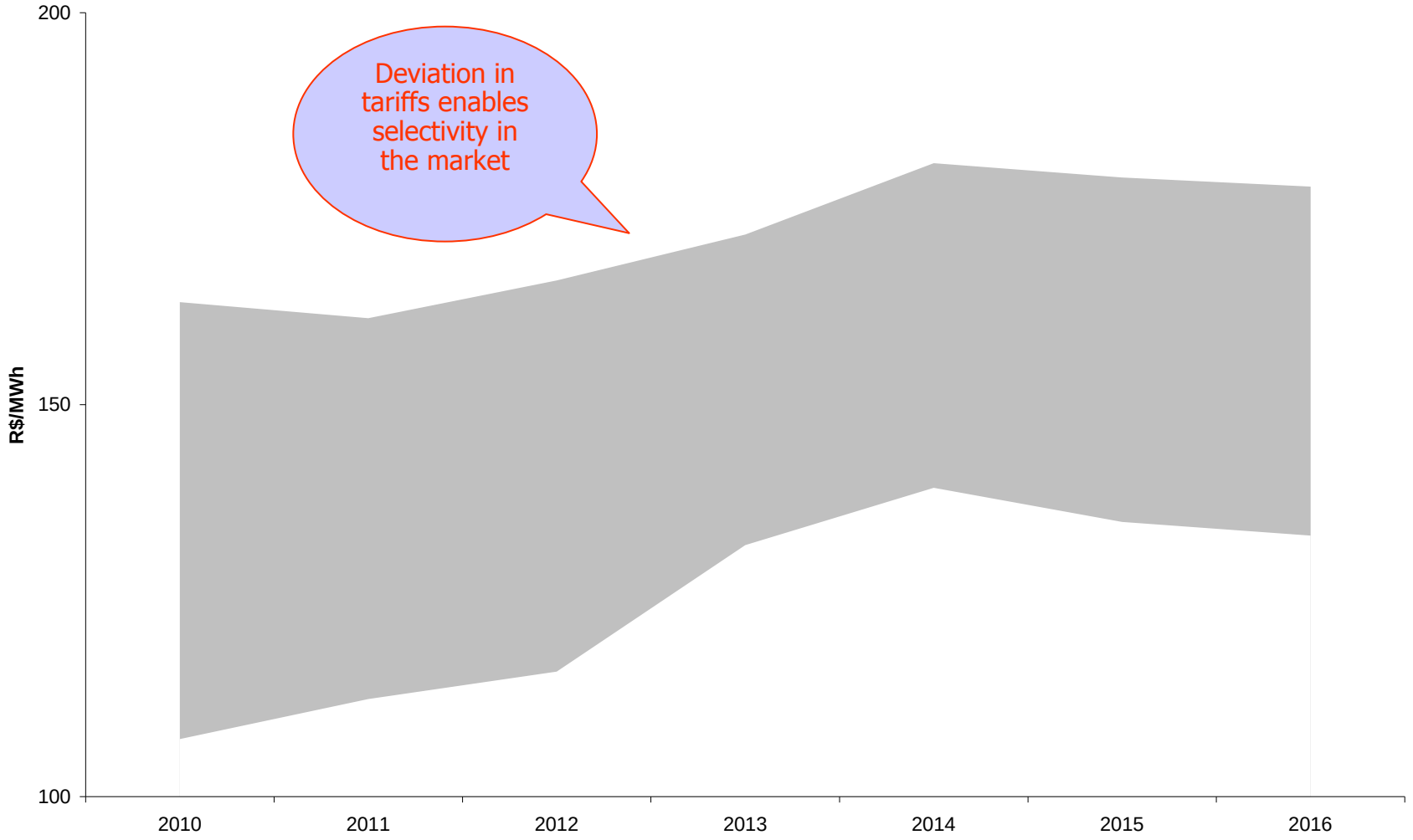
Renewal @ R$ 104/MWh

(2010 average price, considering new energy and existing energy)

Renewal @ R$ 84/MWh

(2010 average price, existing energy)

Deviation Range of Distributors' Electricity Tariffs



Closing Remarks (1)

- Electricity Supply and Demand
  - Demand shows a quick recovery from the economic crisis and above-average (4% average growth from 2002 to 2009) growth is expected in the next years
  - The gap in supply between 2007 and 2008 was compensated by the economic crisis and start-up of new plants
  - Hydro generation has reached levels above assured energy in the past years
    - Secondary electricity is ~6% (2005-2009 average)
  - Wind plants are being considered competitive, on the back of subsidies
  - The Brazilian system is mainly well balanced until 2014
    - Droughts and/or delays in plants' start-up may impact electricity supply
  - Increase in supply based on thermal plants
    - Percentage of thermal generation will increase from 13% (2001) to 24% (2014)
    - Thermal plants with small capacity and different variable costs should contribute to increase in volatility

Closing Remarks (2)

- Spot Price
  - Prices are still volatile
  - Operators' risk aversion influences spot price
    - Sometimes, operation on the back of risk aversion is preferred over economic outputs
  - Madeira Plants, in spite of having big capacity, are "run-of-river" plants, and should not contribute to reduce volatility
- Price for Medium-Term and Long-Term Contracts
  - Until 2012, new energy contracted by distributors will sustain the tariff increase in Regulated Market (proxy for Free Market)
  - Beyond 2013, uncertainties regarding extension of existing energy contracts
    - Extension will be affected by decision over concessions renewals
    - Expiry of concessions entails 11,200 MWa between 2015 and 2017, mainly impacting state-owned companies
- Market has been considering low PLD prices in the short-term, and upward price trend for electricity in the medium/long-terms
  - Risk aversion is key in price definition for each competitor

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