# **Endesa Colombia Results**

As of September 30th, 2012











# 1. 15 years of presence and growth in Colombia

2. YTD Operational and Financial Results

3. 2012 Strategic Projects Update

4. Q&A



## 15 years of presence in Colombia

15 years living with energy

More than 30% increase in installed capacity in generation

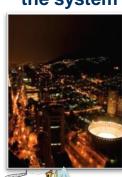


We have **generated** around 174,000 GWh, equivalent to three times the national



Simplification of ownership structure

We have worked to assure the reliability of the system



15 years Living with energy

Improvement of the **Bogota River Generation Chain** 



Beginning of commercial

1997

Codensa Hogar

operations for



más fácil para todos.

2001

**Endesa** Colombia



**Foundation** 



2006

Cartagena **Thermo** Generation **Plant** 

**Integration of** administrative areas

2008

Codensa -Emgesa





Mitigation of environmental impacts in Muña Reservoir



## 15 years of presence in Colombia

15 years making things happen

Construction and modernization of **substations** 





Leaders in **Electric Mobility** 

Total social investment for USD\$34 million by Codensa, Emgesa and the Endesa Foundation in 15 years

2009

Acquisition of 49% of EEC in

association with

**EEB** 

2010

2012

15 years

Making things happen

**El Quimbo Hydroelectric Plant**, first hydroelectric
project built by a private
company in Colombia





Inaugural
Christmas
Lighting
Project

56% growth in capacity to import energy from the National Transmission System (from 2,406 to 3,750 MVA.)





Strong credit quality recognized by rating agencies and investors



## **Enel Latam Strategic Plan 2012-2016**

**Consolidate leadership position in Latin America** 

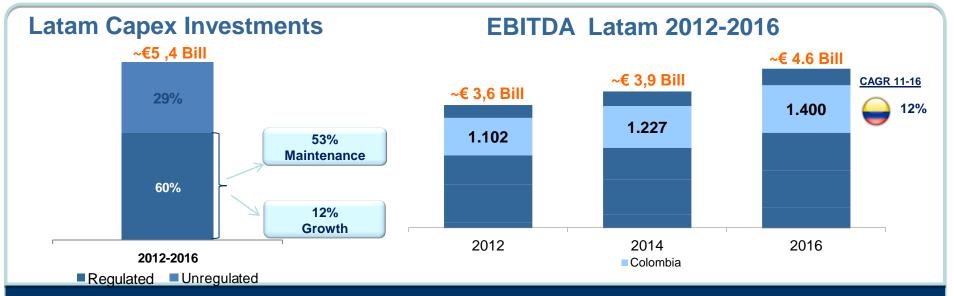
Organic growth opportunities

Cash optimization

Structure optimization

Operational Excellence

- Generation: ~1.1 GW additional installed capacity (Bocamina II 350 MW, Quimbo 400 MW, Talara 183 MW, Casalaco 144 MW) and increasing pipeline
- Distribution: ~1.8 million new clients over the period
- Cash optimization: Selective "just in time" investments
- Optimize companies tariffs reviews
- Pursue new regulatory model in Argentina
- Capture opportunities to optimize current structure
- Synergies and Zenith Plan, Operational excellence





#### Who is Endesa in Colombia?

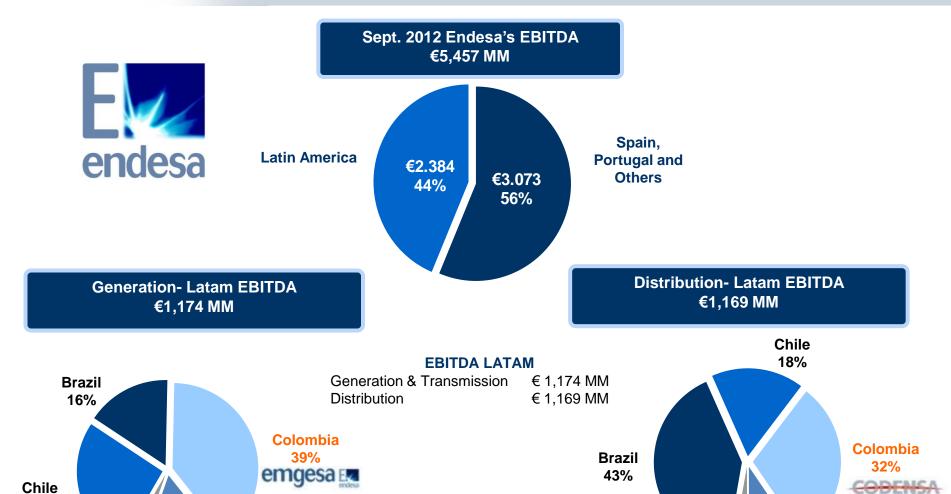
**Argentina** 

-3%

Peru

10%

Latam and Colombia: Relevant assets and increasing participation within the Endesa Group



As of Sept. 2012 Colombia generated 35% of Endesa's Latam

EBITDA and 15% of the Endesa

**Group consolidated EBITDA** 

Peru

16%

**Argentina** 

3%

26%



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### **Emgesa's Generation & Commercialization**

Operational strength, efficiency and diversification

#### **Availability:**

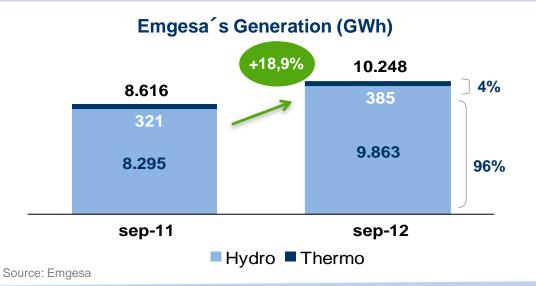
Jan-Sep 2012: 90%
Market share by installed

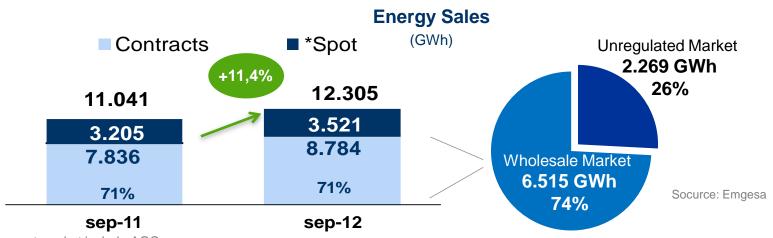
capacity:

Jan-Sep 2012: 20%

**Market share by generation:** 

Jan-Sep 2012 : 23%





<sup>\*</sup>Sales in spot market include AGC

AGC: (Automatic Generation Control) means the secondary frequency regulation represented in fees paid to electricity generators by XM (Colombian Administrator of the Commercial Exchange System) acting on behalf of electricity generators in the Wholesale energy market, for implementing technology that moderates the frequency of electricity in order to guarantee the quality of electricity along the National Transmission System

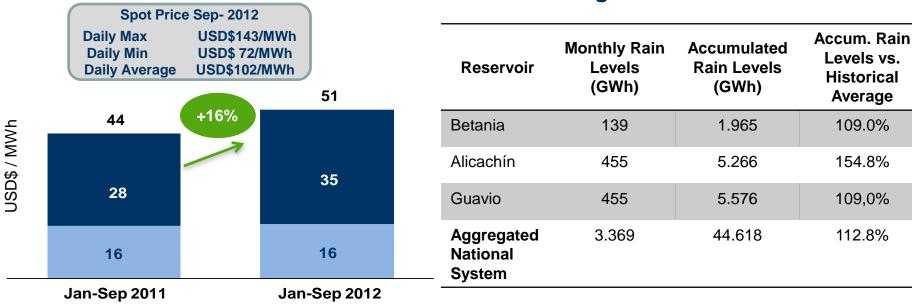


## **Spot Price & Reserves Volume**

Strong position to face "El Niño" phenomenon expectations

#### **Accumulated Spot Price Evolution**

#### **Emgesa's Reservoirs**



\*CERE: Real Equivalent Cost of Energy included in the minimum price for energy offers in the market, in daily auctions and contract sales which corresponds to the sum of several charges, allowing generation companies to collect the reliability payment.

Higher spot energy price as of September, 2012 due to expectations of a dry season (El Niño Phenomenon) and strong position from Emgesa to face it:

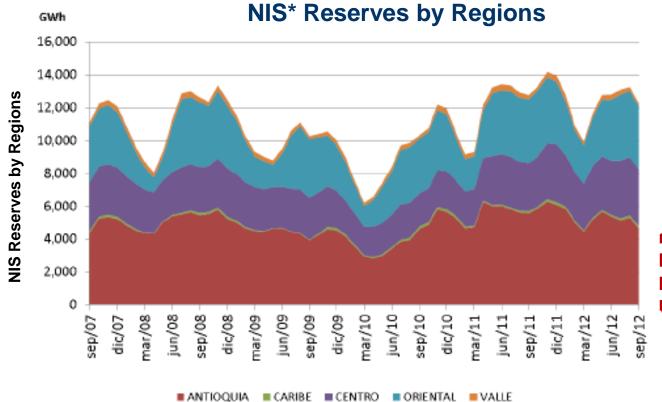
High future sales contract level: 100% for 2013, 82% for 2014 and 32% for 2015

High levels of accumulated energy in our reservoirs



## **System Reserves**

#### Higher hydro reserves among Eastern and Central region



Region	%	GWh
Antioquia (Western)	76.1	4,672.6
Caribbean	78.5	150.9
Central	81.1	3,446.5
Eastern	91.3	3,840.8
Valle	40.8	184.8
Total NIS	80.7	12,295.6

Source: XM

As of September 30, 2012

\*NIS: National Interconnected System

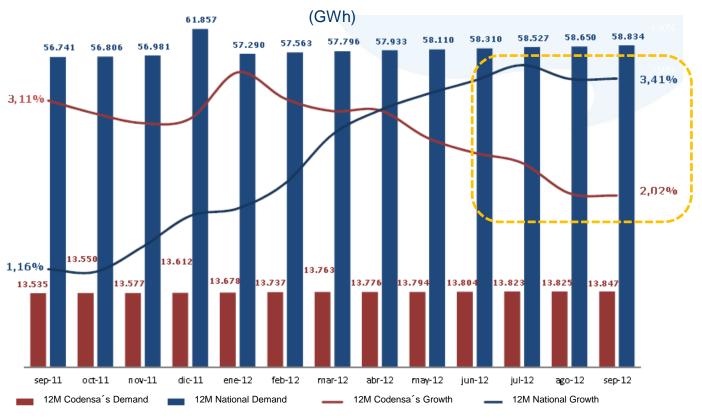
In 2012 the east and central region have had the highest rain levels in the country favoring Emgesa's hydro plants reserves and increasing their dispatch capacity with a higher price scenario



#### Demand by Markets in Codensa's Area

**Energy demand growth in Codensa's area** 

#### National Demand vs. Codensa's Area Demand



Increase in national demand due to strong growth in the mining sector in the Caribbean and Eastern region, out of Codensa's area

Decrease in energy consumption from industrials in the Bogota area due to the slowing of their activity reducing the use of Codensa's networks by other commercialization companies

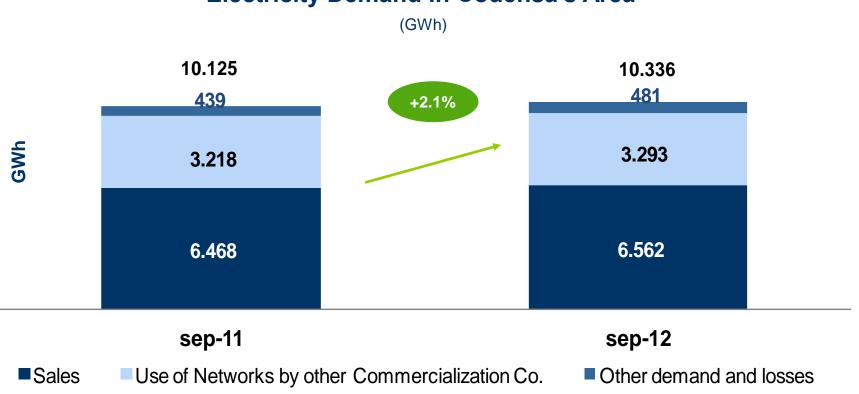
Source: Codensa



## Codensa's Energy & Sales

Decrease in energy consumption by industrials





% of sales supported by contracts: ~ 90%

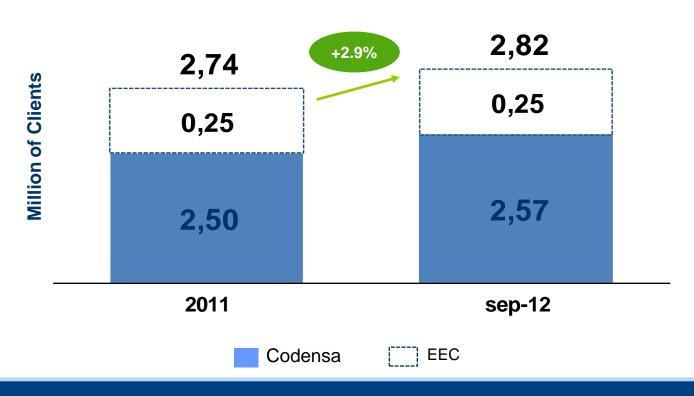
Increase in energy demand in Codensa's area led by the commercial sector and regulated demand



#### **Codensa's Growth of Client Base**

Sustained growth of client base

#### **Number of Clients Growth in the Distribution Business**



Important organic growth in Codensa's area: nearly 70,000 new clients added as of September, 2012 surpassing the annual average. (350,000 new clients added by 2016)

Codensa's investments reached USD\$85 million out of which, USD\$5 million were destined to the construction of new substations to supply growing demand

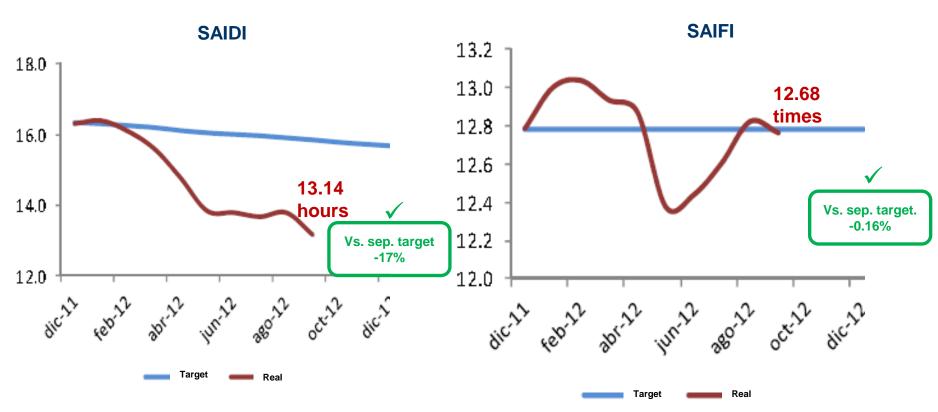


## **Codensa's Quality of Services Index**

Improved quality service indexes under international competitiveness standards

#### **International Quality Service Indexes**

12 months



Source: Codensa

SAIDI: System Average Interruption Duration Index, is the average outage duration for each customer served SAIFI: System Average Interruption Frequency Index, is the average number of interruptions that a customer would experience

Improvement in quality service under international competitiveness standards after the effects of the rainy season experienced in 2011

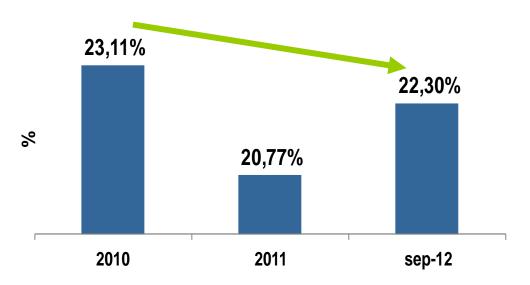


#### **Codensa's Past Due Accounts**

Transitory increase in the past due accounts index

#### Past Due Accounts Index for Electricity Service\*

Without Public Lighting



Source: Codensa

Minor increase in the past due accounts index due to differences in the billing periods with some clients and the entrance in operation of a new call center contract affecting payment remainders to clients

Collection level: 104.58%

More than 300,000 web transactions by Codensa's clients as of September, 2012

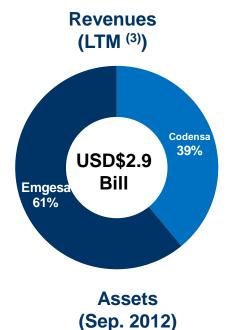
<sup>\*</sup> The Past due accounts index for electricity service measures the participation of accumulated past due accounts (over 30 days of delay in the payment) in the last 12 months average charge of energy and use of networks only. It doesn't include public lighting in Bogota City.



## **Endesa Group in Colombia**

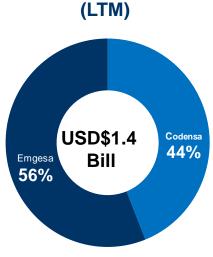
**Aggregated figures for Codensa and Emgesa** 

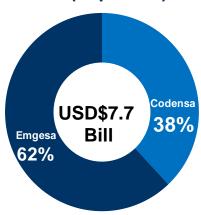
**EBITDA** 



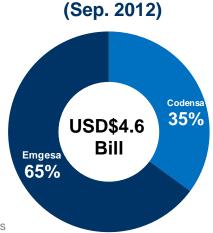
### **Endesa Group in Colombia**











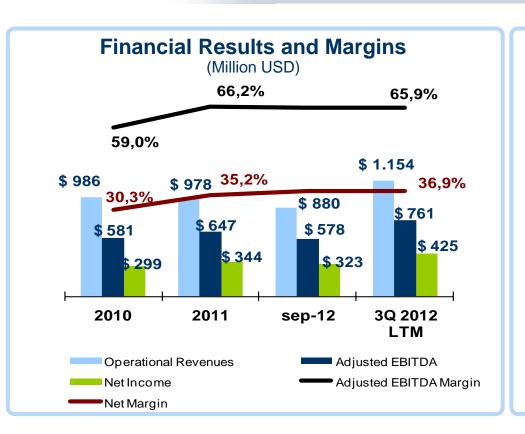
**Equity** 

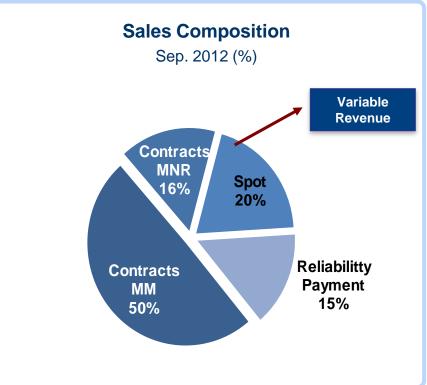
- (1) Ratings confirmed in February, 2012 by S&P (stable outlook) and in May, 2012 by Fitch Ratings (positive outlook).
- (2) Corresponds to aggregated and audited figures for Codensa and Emgesa as of September 30, 2012  $\,$
- (3) Last Twelve Months



## **Emgesa's Financial Results**

Commercial policy's effectiveness proven in financial results





Increase in operational revenues due to larger sales in the spot market given rainy conditions in the 1H 2012 and lower energy purchase to meet contracts

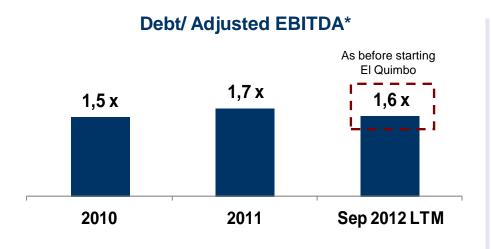
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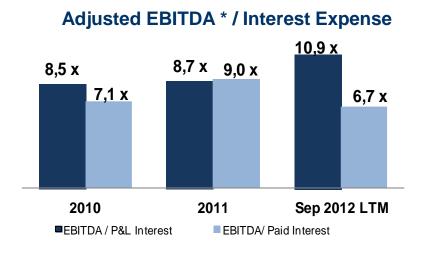
<sup>\*</sup> El EBITDA ajustado se calcula adicionando la depreciación y amortización (incluidas en el costo de ventas y gastos administrativos) a la utilidad operacional (la cual se estima de sustraer el costo de ventas y los gastos administrativos de los ingresos operativos).

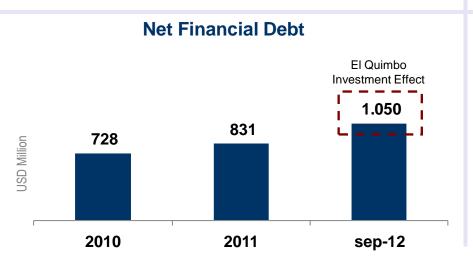


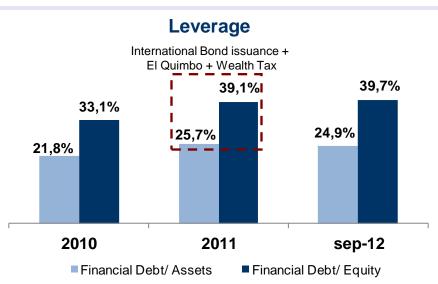
## **Emgesa's Key Credit Metrics**

Resilience of financial indicators under extreme hydrological conditions







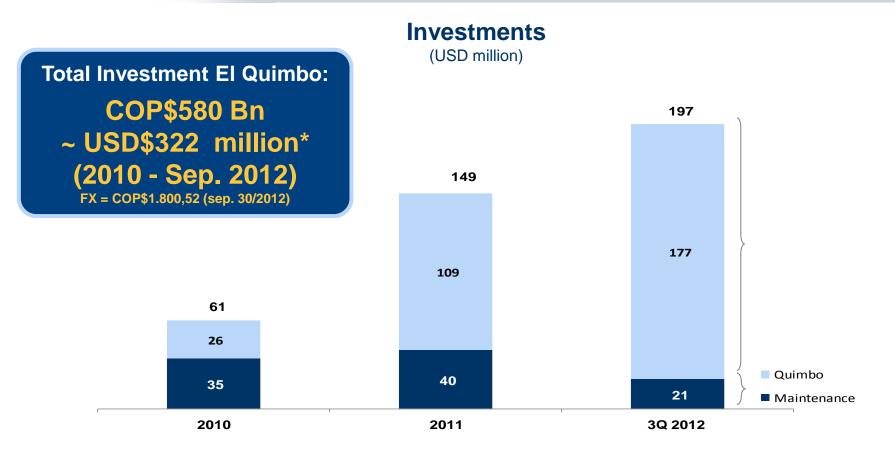


<sup>\*</sup> El EBITDA ajustado se calcula adicionando la depreciación y amortización (incluidas en el costo de ventas y gastos administrativos) a la utilidad operacional (la cual se estima de sustraer el costo de ventas y los gastos administrativos de los ingresos operativos).



# **Emgesa's Investments**

Investment growth according to project execution



Investments oriented to El Quimbo Project and preventive maintenance for hydro and thermo plants, to preserve their availability and reliability



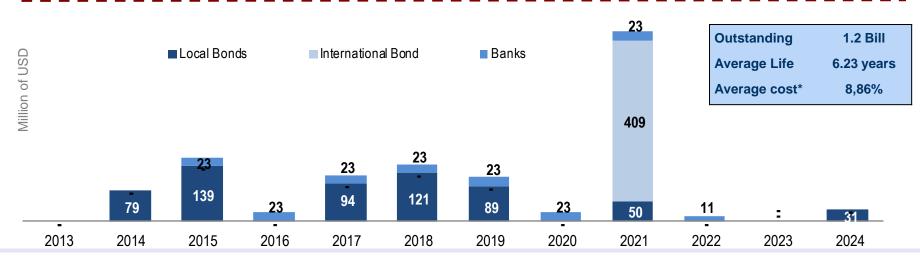
## **Emgesa's Debt Profile**

Moderate amortization profile despite new projects development

#### **Amortization Schedule**

(MM USD) as of June, 2012

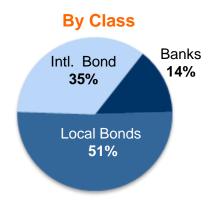
#### EBITDA (2011) ~ USD\$707 MM

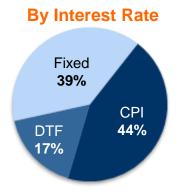


#### **Financial Debt Breakdown**

as of September, 2012



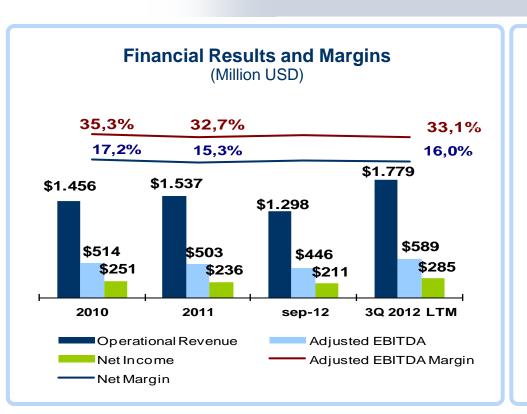


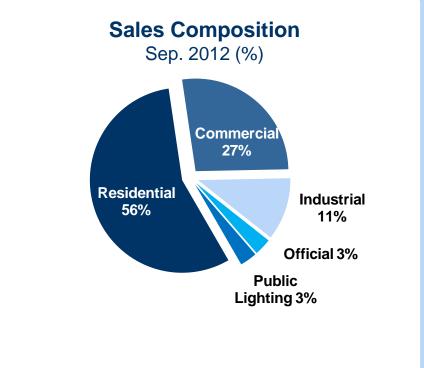




#### **Codensa's Financial Results**

Operational revenues growth and margin stability





Increase in operational revenues due to a higher energy cost and larger volumes of energy distributed

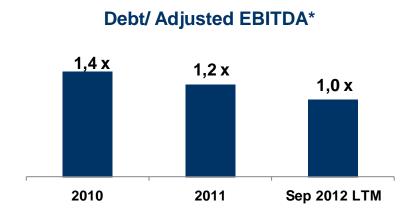
Stable growth of the regulated (+1.8%) and commercial (+8.0%) demand Sales to industrial and commercial clients: 83% of operational revenues

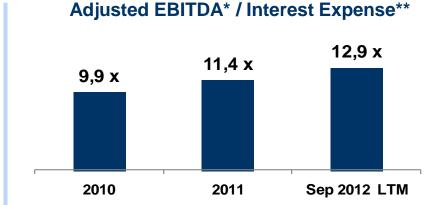
<sup>\*</sup> Adjusted EBITDA is calculated by adding back the depreciation and amortization (included in cost of sales and administrative expenses) to operating income (which is calculated by subtracting cost of sales and administrative expenses from operating revenues).

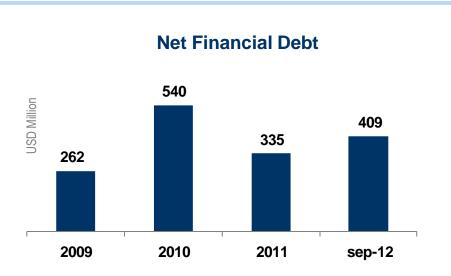


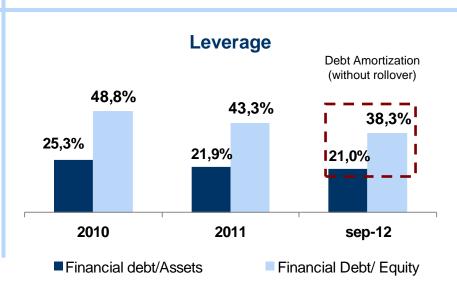
# **Codensa's Key Credit Metrics**

Outstanding credit rating and conservative risk profile consistent with AAA local rating









<sup>\*</sup>Adjusted EBITDA is calculated by adding back the depreciation and amortization (included in cost of sales and administrative expenses) to operating income (which is calculated by subtracting cost of sales and administrative expenses from operating revenues).

<sup>\*\*</sup>Interest according to P&L

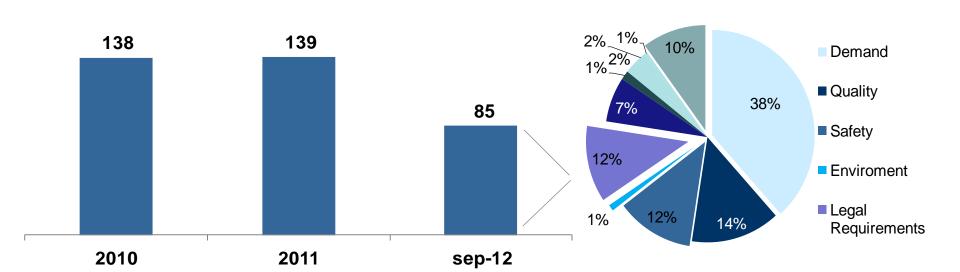


#### **Codensa's Investments**

Investment dedicated to server demand growth, quality service and losses

# Investments

(USD million)



Total investments reached USD\$85 million, out of which USD\$67 million correspond to technical investments oriented to sustainability and growth in the distribution business



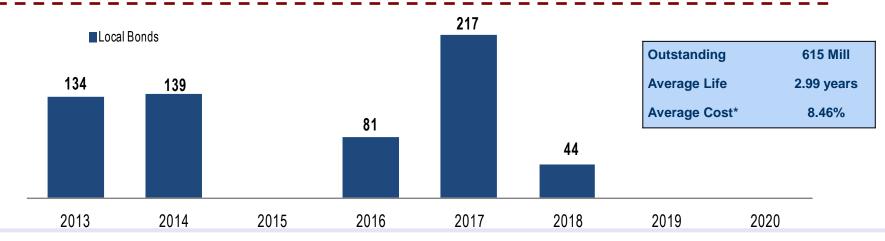
### Codensa's Debt Profile

**Conservative Debt Profile** 

#### **Amortization Schedule**

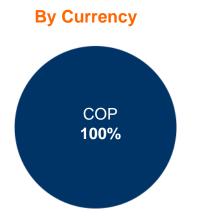
(MM USD) as of September, 2012

EBITDA (2011) ~ USD\$503 million



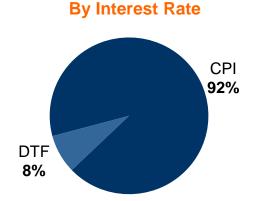
#### **Financial Debt Breakdown**

(MM USD) as of September, 2012





**By Class** 



<sup>\*</sup> Calculated with CPI and DTF as of September 30, 2012

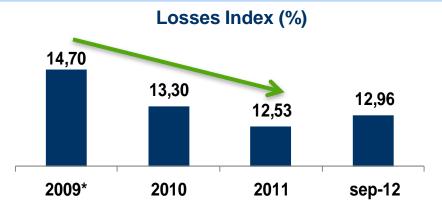


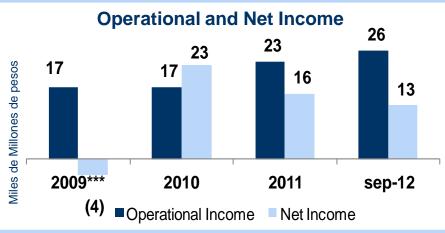
### Empresa de Energia de Cundinamarca

Outstanding financial and operational results since DECSA controls the company









Since March 2009 Codensa holds 49% of EEC through DECSA and manages the company trough a Technical Assistance Agreement, that has resulted in the improvement of EEC's operational and financial indicators through the know-how transfer from Codensa

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<sup>\*\*</sup>Adjusted EBITDA is calculated by adding back the depreciation and amortization (included in cost of sales and administrative expenses) to operating income (which is calculated by subtracting cost of sales and administrative expenses from operating revenues).

<sup>\*\*\*2009</sup> figures include expenses related to adjustments and corrections due the acquisition for COP\$76.221 million for contingencies, voluntary retirement plans, pensions and provisions.



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## Three components, One Goal

Relevant projects to face the challenge of maintaining our leadership



# **Strategic Projects 2012**

**Bogota River** Expansion Environmental **New Substations** Opportunities in Gx Improvement: and DX Canoas+ Salaco **Strategic Projects** Regional oriented to El Quimbo Interconnection with Growth Hydroelectric Project Panamá **Strategic Losses Control Innovation Projects** oriented to Competitiveness Improvement in thermo Technical quality Dx plants reliability improvement Safety **Sustainability Initiatives** Social Responsability Quality of life

## El Quimbo Hydroelectric Plant

Main highlights



Single purpose reservoir located on the Magdalena River, 12 km upstream from Betania

- Installed capacity: 400 MW (Francis, 2x200)
- **Expected average annual generation:** 2,216 GWh (60% Load Factor)
- *Total project area:* 8.586 Ha. (6 municipalities)
- Construction period: Oct. 2010 2014
- Estimated Investment: USD\$ 837 million
- USD\$430 MM Reliability Charge assigned between 2014 2034
- Environmental and Social compensation:
  - Restoration of 11.079 Ha in Dry Tropical Forest ecosystems
  - Emgesa aims to have 100% of the relocated population with a quality of life equivalent or better than what they had prior to the relocation

h a the the Emgesa's central



The construction of El Quimbo is aligned with Emgesa's central purpose and growth strategy



## **Bogota River Plan**

Coordinated efforts to guarantee business stability

## **CANOAS**

- Efforts to develop an integrated solution to the Bogota River contamination problem
- Solution agreed with the national government (feb/2011) to build a Wastewater Treatment Plant and Canoas Station
- Available resources for the project:
  - Agreement with Environmental Ministry for COP\$75 Bn (~USD\$42 million)
  - National Royalties Fund for COP\$120 Bn (~USD\$67 million)
  - Interinstitutional agreement between Emgesa and Empresa de Acueducto y Alcantarillado de Bogotá (EAAB) by which Emgesa contributes with COP\$84 Bn (~USD\$47 million)



## **SALACO**

- Repowering of minor plants chain near Bogota River increasing installed capacity in 144 MW.
   We expect to double production from 480 GWh/year to 924 GWh/year)
- Estimated investment USD\$29 million
- Bidding process established in June 2012 to hire the engineering firm to execute the project
- Gradual commercial operation entrance by the end of 2013 and fully by 2014

Initiatives oriented to extend the water concession of the Bogota River (2018-2038)



## **Project Portfolio**



Ample portfolio of projects in Colombia anticipating business opportunities

Study of an ample portfolio of projects and business opportunities:

# Generation

More than 2,300 MW expansion projects in hydro and thermogeneration under study in different regions of the country

# **Distribution**

 Over one million of additional potential new clients through possible privatization plans of the companies currently owned by the Colombian government







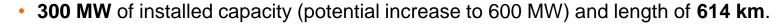
Endesa companies in Colombia have a relevant growth and expansion potential within regulatory restrictions of market share for distribution and generation



### **Colombia-Panama Interconnection**

Significant and sustainable growth opportunity in the region

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• ICP (Interconexión Colombia Panamá S.A.) a partnership between ISA and ETESA, will develop and invest in the project.



- Payment for the use of the line to be determined through an auction of the financial rights of access to the line's capacity (DFACI)\*
- Important business opportunity for Colombia and Emgesa allowing the entrance to the Panamanian and Central American energy markets
- Considerable amount of power with potential to be offered (400 MW to be auctioned in 2013 and 1.100 MW in the future)



**Characteristics** 

- DFACI auction postponed indefinitely on August 19, 2012 by ICP
- Colombian participation suspended in the auction to sell long-term power and energy to Panama
- Advancement in the study process and technical and environmental definitions
- Governments from Colombia and Panama have ratified their commitment to support the project

\*DFACI allows to provide power and energy to Panama starting from the entrance in operation of the interconnected line between Colombia and Panama

#### emgesa Exendesa

Growth

#### Codensa's New Substations

New substations to supply demand growth in Bogota

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- Reinforce and maintain Codensa's position as exclusive distribution
- Improves reliability of current and future energy supply to Bogota



- 459 MVA 500/115kV project
- Serve future demand of Bogota and Cundinamarca
- Environmental license expedition expected by November, 2012
- Interconnected lines licenses expected by 1Q 2013



- Debate among the community to allow the construction of the substation affecting current clients
- In search for dialog opportunities with the community
- -Total project advance: 68.6% (75% in MT networks and 99% in lines)



# **Losses Control & Quality Service**

Capturing efficiencies in execution and investments to fulfill quality standards

# **Losses Control & Quality Service**

Permanent improvement in losses index and increase in quality requirements:

- Decrease in losses index to capture of premiums of efficiency
- Renewal and technologic update of macro measurement infrastructure in low and medium tension
- Revision of new zones and economic segments (e.g. mining zones in Cundinamarca)
- Technical losses reduction through redesign and balance of distribution transformers
- Remote monitoring and asset management
- Failures location



Source: Codensa

Losses index at low historical low levels due to infrastructure development and implementation of remote monitoring (Mantis)

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# Operational & Regulatory Results

Management & adequacy of assets as competitive advantage

# Reliability & Compliance

Asset management to achieve operational reliability and regulatory compliance regarding gas emissions in thermo plants:



- **Preventive maintenance** to anticipate potential failures
- Reliability analysis: corporate models and in-house development
- Training, competences validation and certifications.
- Investments and adequacy works of **equipments and control systems in Termozipa Plant** to comply with gas emissions regulation (July, 2011):
  - Reconstruction of 80% of the boiler in Termozipa's Unit 2 at the end of its useful life (47 years)
  - ✓ Installation of Electrostatic Precipitator to capture particle material
- Project to adequate the ash extraction system in the Termozipa central (of the humid type) to comply with the dumping requirements in hydro sources (Bogota river) since November 2012.

3Q 2012 Endesa Colombia Results



#### **Leaders in Innovation**

Concrete results of innovation investments that improve competitiveness



# Innovation

Support to initiatives developed by our employees:

- Two patents obtained by Codensa in 2012:
  - To model usefulness, to the project "Electrical Distribution Pole with an incorporated grounding system".
  - To invention, for a 20-year period since the application of the project: Winding connection to supply tri-phased power from a 2x3 feed and transformer"
- According to the World Intellectual Property Organization Codensa is the 4<sup>th</sup> company in intellectual property in Colombia within 11 patents applicant companies
- Finalist in Accenture Innovation Awards 2012 for the 2x3 Transformer in energetic resources category.

## **Safety as Priority**

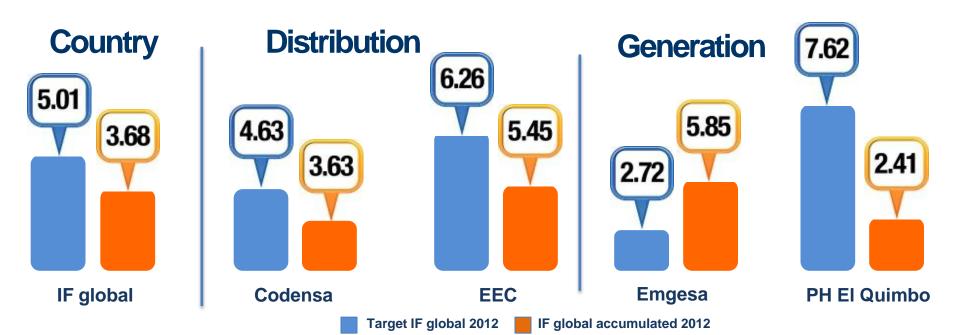
Focus on staff security



# **One Safety**

Behavioral oriented methodology for a culture of safety:

- More than 62,000 training hours for our contractor companies in our Training center (2012-2012)
- More than 10 historic meetings with contractor companies
- Nearly 5,100 certifications obtained in technical regulations, work at heights and environment





## **Sustainable Projects**

Committment with sustainable projects for the community and the environment



# **Corporate Social Responsibility**

Initiatives with social and environmental commitment

#### **Endesa Forest**

- 10.000 trees planted in 2011 (460 Ha in Soacha municipality)
- Pioneers in forest keeping as carbon sink
- Developments to access a Forestal Incentive
   Certificate for conservation/reforestation
- Emissions reduction by deforestation and degradation -REDD

#### **Lights to Learn**

- Installation of solar panels in schools in the Alta
  Guajira (north of the
  Country)
- Training of teachers and delivery of computers
- Execution of an agreement that will benefit 330 students in 5 communities (Oct-2012)

#### **Endesa Educates**

- 700 low-income young students certified as technicians in electricity distribution and commercialization techniques
- Future job opportunities in the sector

#### **Local Development**

- 1.000 Ha of coffee crops renewed (+ 600 beneficiary families) in Cundinamarca in alliance with the Departmental Coffeegrowers Committee
- Formation of social leaders and counselors of the municipalities of Yacopí and Caparrapí in alliance with the Central Magdalena Development Program













# **Electric Mobility**

Constant steps regarding electric mobility initiatives:

- Pilot plan for 50 electric taxis
  - Pilot program regulation by the Mayor's Office
  - -Allocation of 31 taxis between 2 companies
- 15 additional electric vehicles in Codensa's commercial operations
- Sponsorship from Colciencias to extend the pilot program to 48 e-bikes (e-bike to work) at the company's facilities (Calle 93, Calle 82 and Edificio Técnico).







### **El Quimbo Recent Developments**

**Update** 

- √ Total investment as of September, 2012: USD\$267 MM<sup>(1)</sup>
- √28% advancement (sep. 2012)
- ✓ Amendment No. 5 to the civil works contract (Impregilo-OHL):
  - Adjustment to price contract for COP\$67 Bn (~USD\$37 million) due to the reimbursement of completed works and longer permanency in accordance to the new schedule
  - •Payment of COP\$33 Bn (~USD\$ 19 million) conditioned to the anticipated completion of one of the milestones in the project related to the filling of the reservoir, beginning of operations in the spillway, bottom discharge and machine house.

# Price adjustment and payments included in the existing budget of USD\$837 MM

✓ We preserve the date of starting of commercial operations by December 2014 for the First Generation Unit and February, 2015 for the Second Unit, as agreed with Colombian regulators.







#### CODENSA

## Challenges in the execution of El Quimbo

#### Relevant progress despite obstacles in every front line









- Changes to the environmental license
- Preventive measures decreed by environmental authorities
- Department roads deterioration due to rainy season impacting schedule
- Unexpected archaeological findings
- Delayed auction for the connection to the NTS

- Obstruction of access roads
- Fishers invasion in zone
- Protest against the project
- Pressure from the communities to reopen the census
- Emgesa seen as an endless source of funds
- Discredit and misinformation of the project by its opponents
- Illegal territory invasions that involve evictions

- Overestimation of environmental effects e.g.: fish mortality
- Authorities refused to receive restored areas by the project
- Conflict due to illegal flora and fauna procedures
- License overlaps in areas to be restored
- Pending authorization to the restoration plan (more than 2 years).

- Owners extended family requesting for separate compensations (family divisions from the initial census).
- Migratory pressure over villages due to infrastructure works
- Thight schedule for reallocation and forest restoration



# **Endesa Colombia Highlights**

Operationally and financially solid companies, with the support of Endesa and Enel

- 1.
- 15 years of challenges and achievements in Colombia
- 2.
- Positive operational and financial results despite extreme weather conditions and obstacles in projects execution
- 3.
- Challenges to obtain social approval for infrastructure projects trough coordination and transparency with communities and institutions
- 4.
- Leaders in electric mobility and electricity commercialization, identifying new potential markets
- 5.
- Growth potential in generation and distribution businesses within the regulatory limits of market share



#### Contact us

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#### **Disclaimer**

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- This presentation contains an update of the relevant data of the Endesa Group in Colombia and its companies Emgesa S.A. E.S.P. ("Emgesa") and Codensa S.A. E.S.P. ("Codensa"). Both companies are issuers of fixed income securities in the Colombian capital markets.
- Emgesa has been authorized by the Colombian Superintendency of Finance to issue ordinary bonds in Colombia pursuant to Resolution No. 833 dated June 16, 2009 and to issue commercial paper in Colombia pursuant to Resolution No. 1954 dated December 17, 2009.

- Likewise, Codensa has been authorized by the Colombian Superintendency of Finance to issue ordinary bonds in Colombia pursuant to Resolution No. 194 of January 29, 2010.
- Emgesa's and Codensa's financial statements for the year ended and as of December 31, 2009, 2010 and 2011 have been audited and have been approved by the Shareholder's General Assembly of each company. Emgesa's and Codensa 's financial statements as of September 30, 2012 haven't been audited nor approved by the Shareholder's General Assembly of each company.





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