

INFRASTRUCTURE

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SOUTH AMERICA

SOUTH AMERICA

OVERVIEW

Total Area: 18 million km²

Population: 384 million

Economy Growth: 5%/year
(2002 - 2010)

GDP Growth: 24%
(2003 - 2010)

Represents :

6% of global GDP (2010)

and

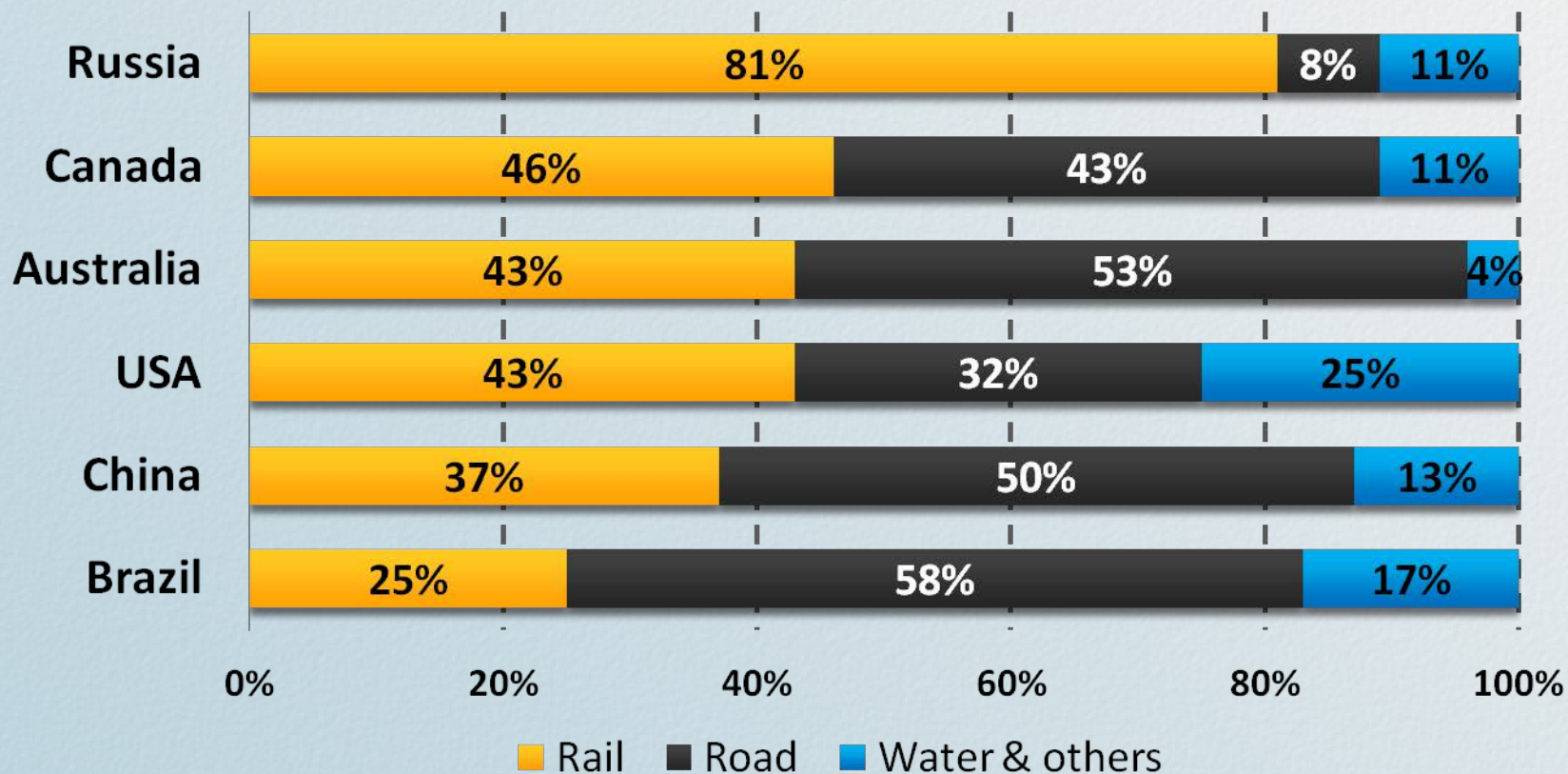
17% of America GDP (2010)



TRANSPORTATION

TRANSPORTATION

Modal Comparison of Domestic Freight Transportation

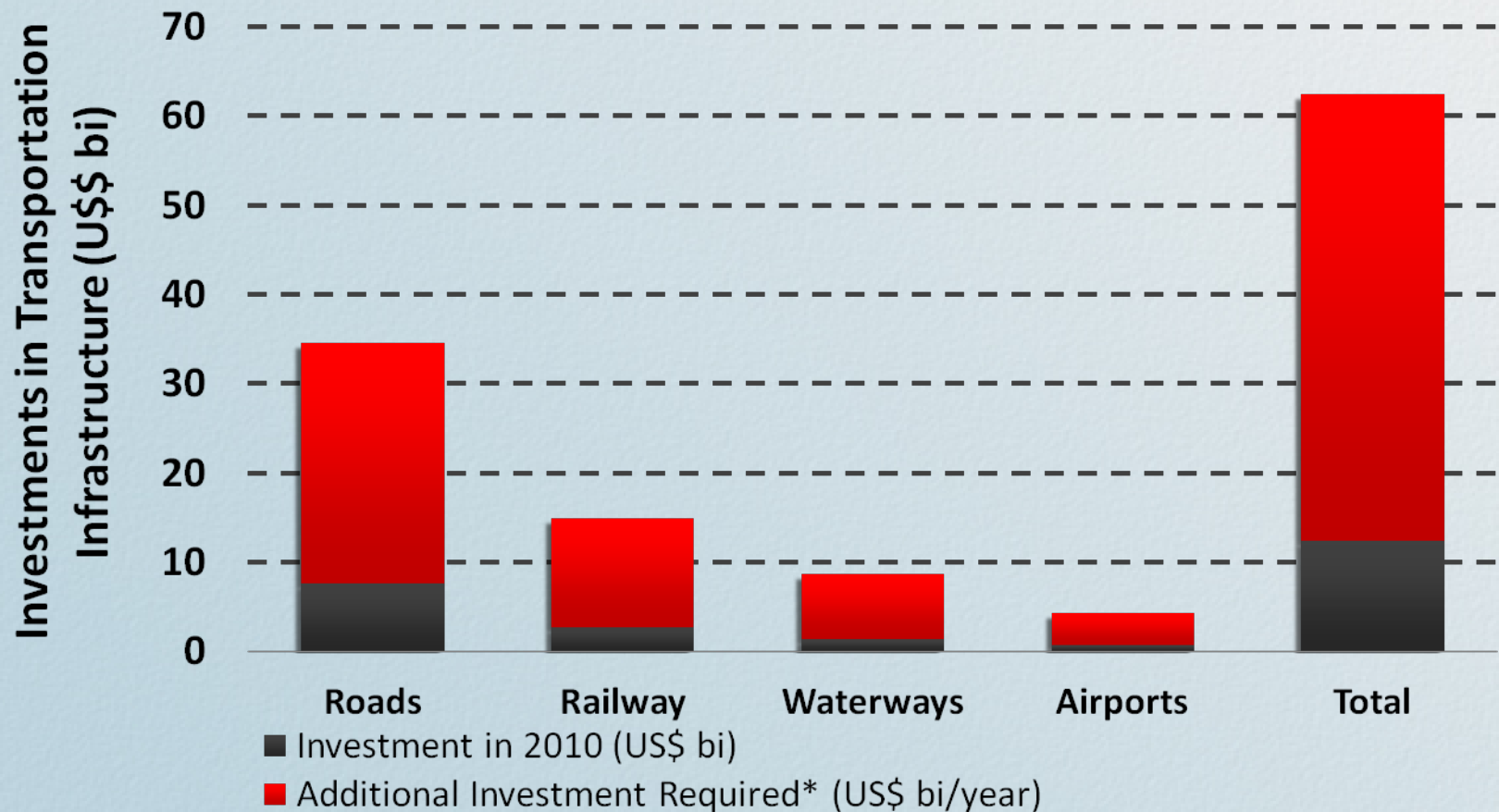


Due to its natural conditions, the country has great potential to develop, diversified, competitive and clean transportation and logistics system.

TRANSPORTATION

BRAZILIAN TRANSPORTATION SECTOR

Current Investments: 0.7% of GDP



TRANSPORTATION

UNASUR - UNION OF SOUTH AMERICAN NATIONS

COSIPLAN

South American Infrastructure
and Planning Council

API Integration Priority Project Agenda

More than
**US\$
21
billion**
in infrastructure
projects

8 integration hubs
31 structural projects
88 individual projects



TELECOM

TELECOM

ATLANTIC CABLE SYSTEM (ACSEA)

- Brasil: USA – Southern Cone – Africa – Europe
- Estimated in US\$ 884 mi
- 24,000 km of submarine cables
- Operation: 2014
- Possible extension from Angola.



TELECOM

THE OPTICAL RING SYSTEM

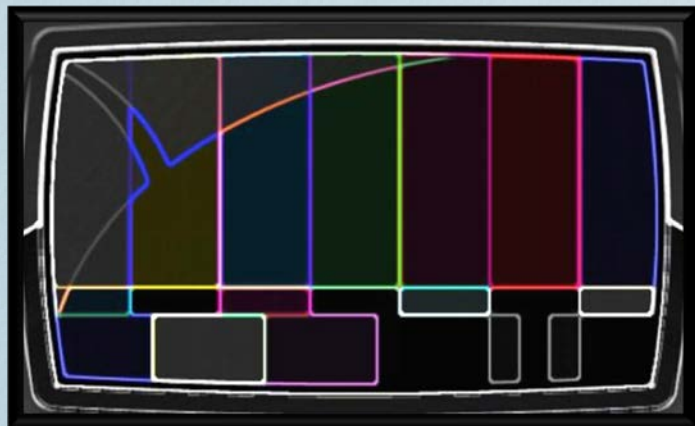
- Strategic project
- Direct network connection of the UNASUR countries
- Cost reduction in data traffic
- Increase of data security and traffic speed
- Conclusion: 2015



TELECOM

DTV

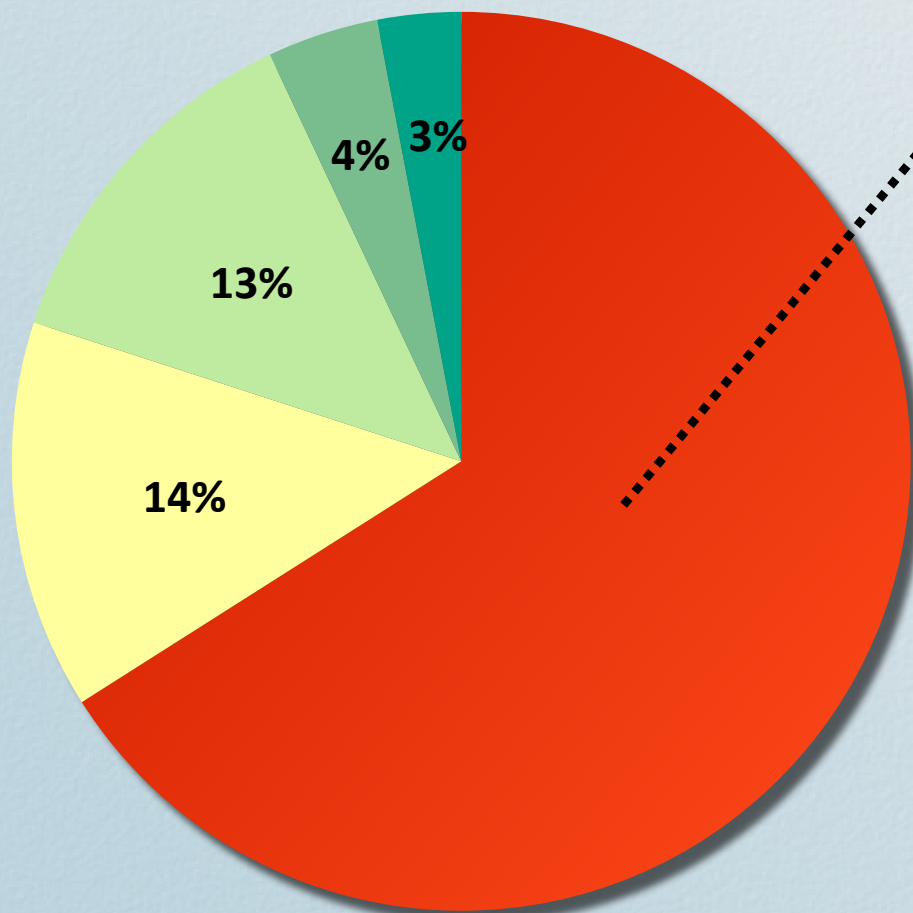
- Technology unification in South America
- **Brazil:** ISDB-T system
- Colombia: DVB- T
- Heading for a regional standard



ENERGY

ENERGY AND CLIMATE CHANGE

GHG EMISSIONS: A SECTORAL APPROACH

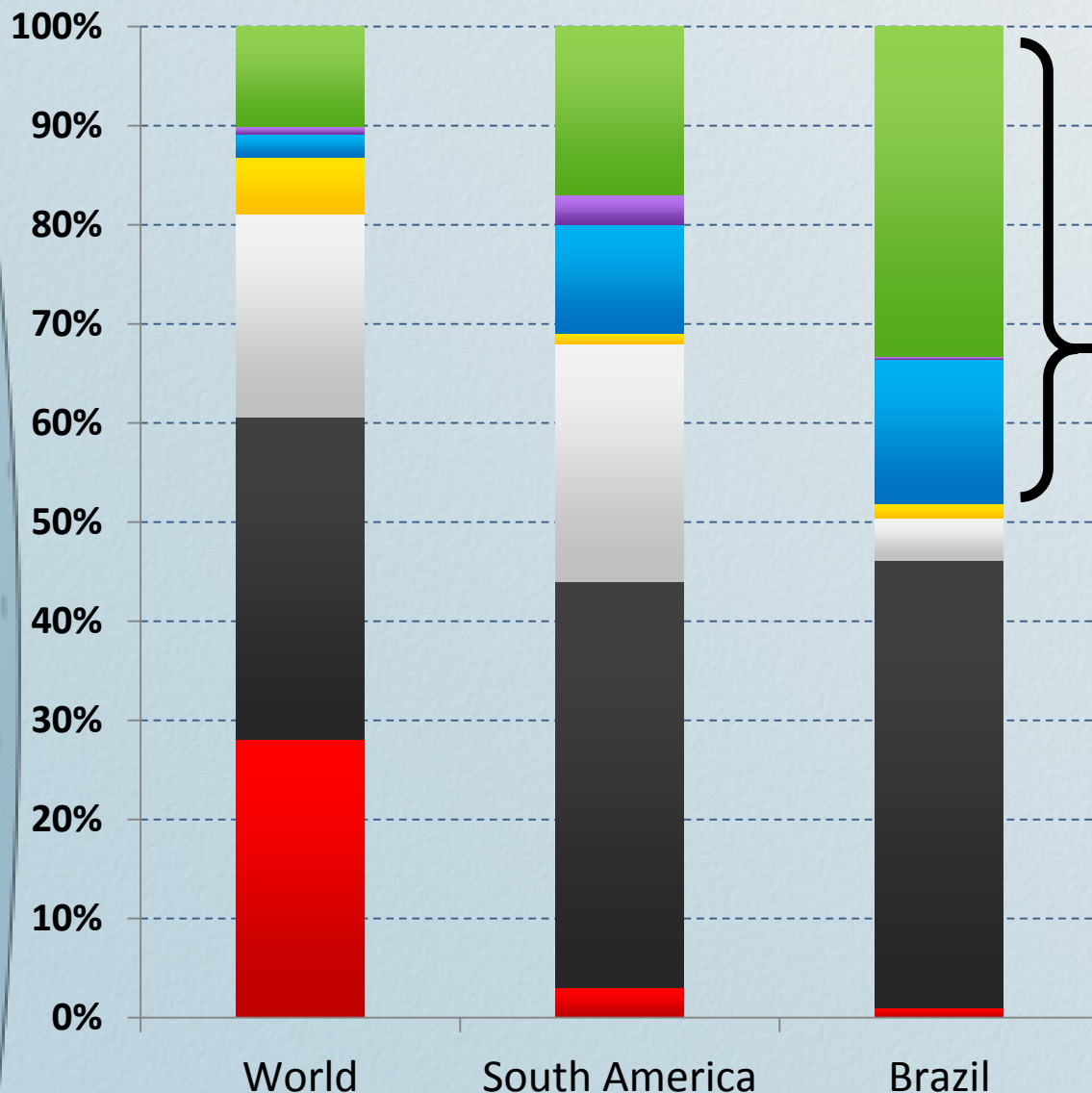


Two thirds
(66%)
of global GHG
emissions result from
energy production

- Energy
- Agriculture
- Changes in land use and forests
- Industrial Processes
- Waste

ENERGY MIX

OVERVIEW



Renewables
represents

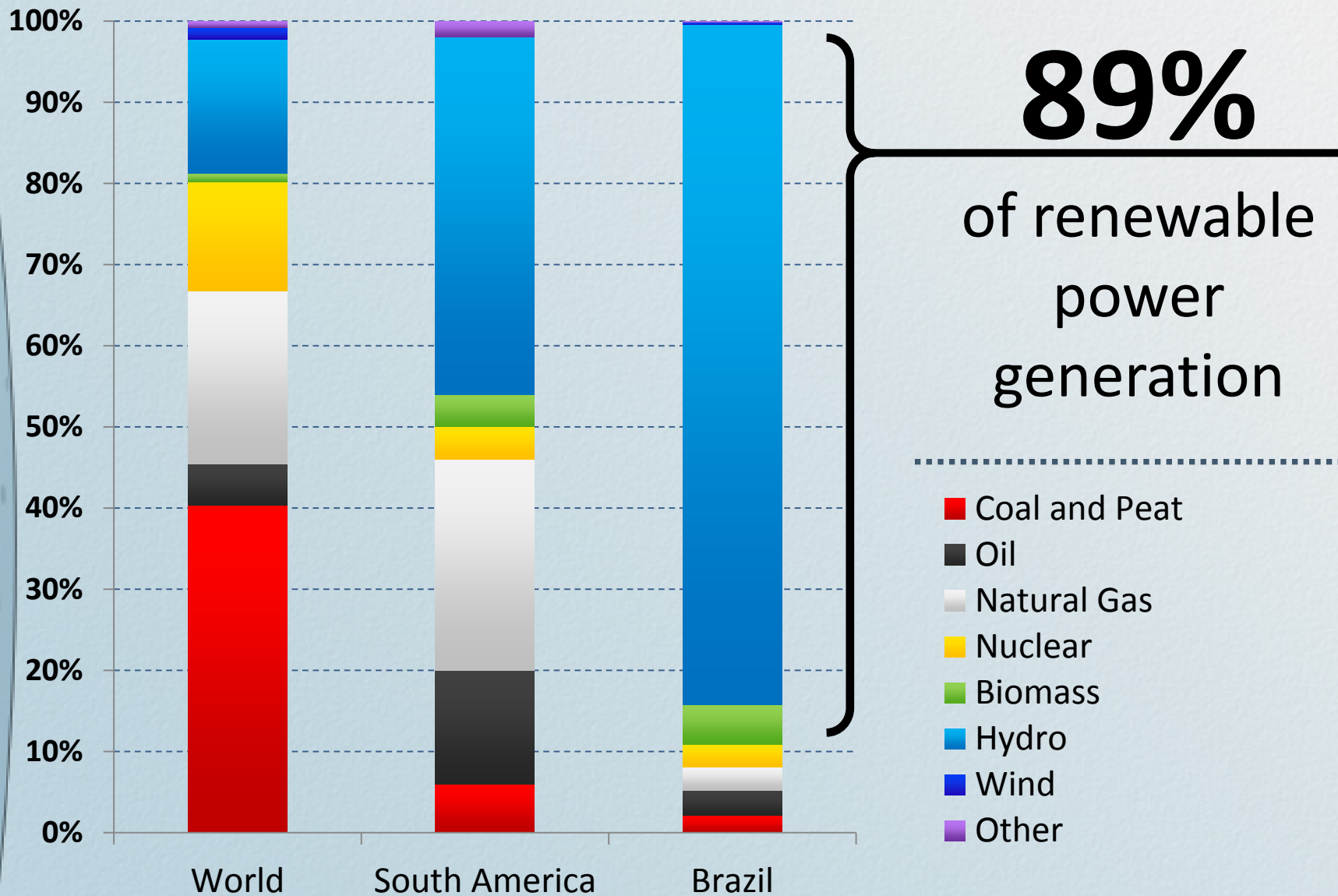
48%

in the
energy mix

- Biofuels and Waste
- Other
- Hydro
- Nuclear
- Natural Gas
- Oil
- Coal and Peat

POWER GENERATION

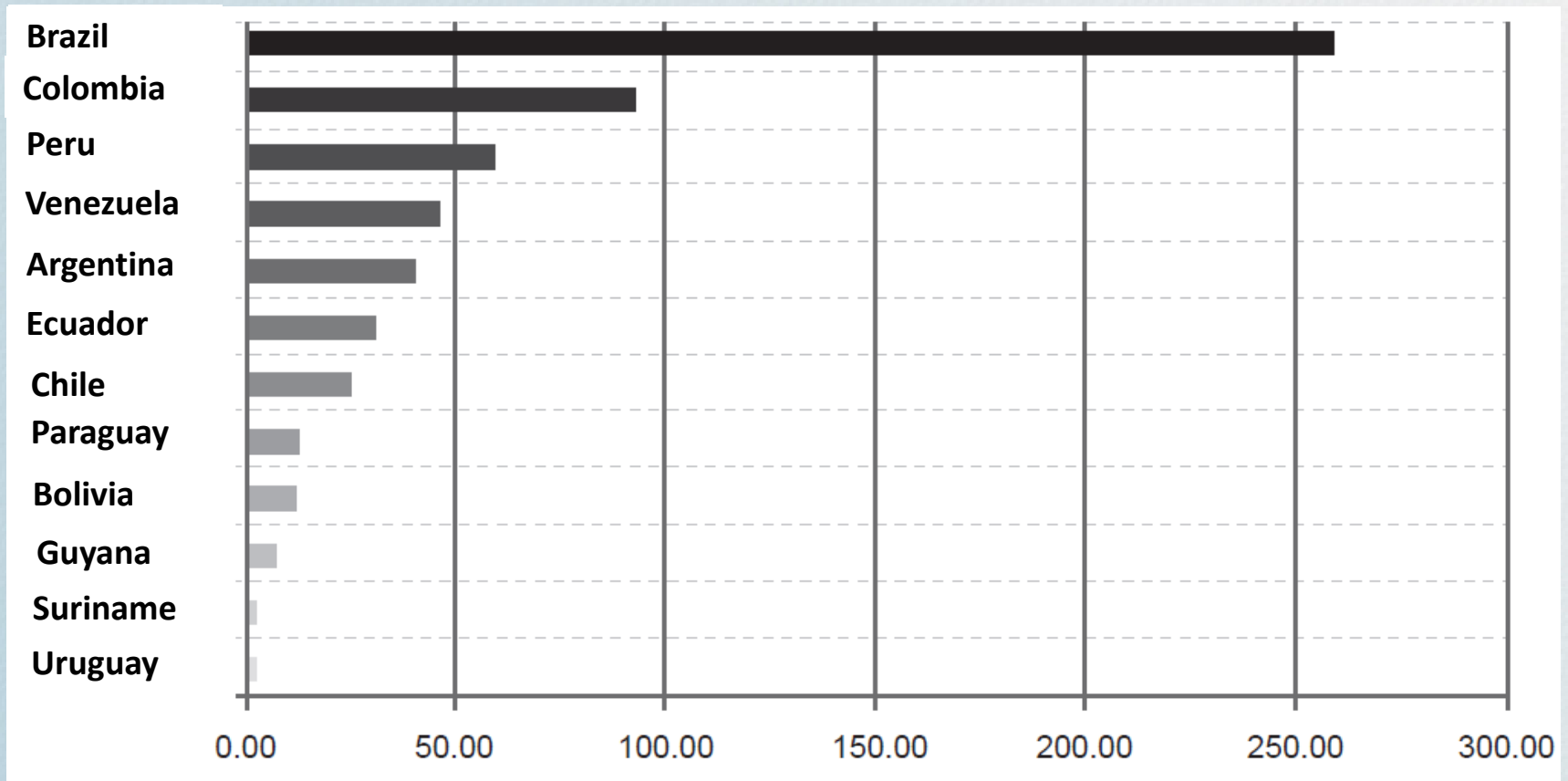
OVERVIEW



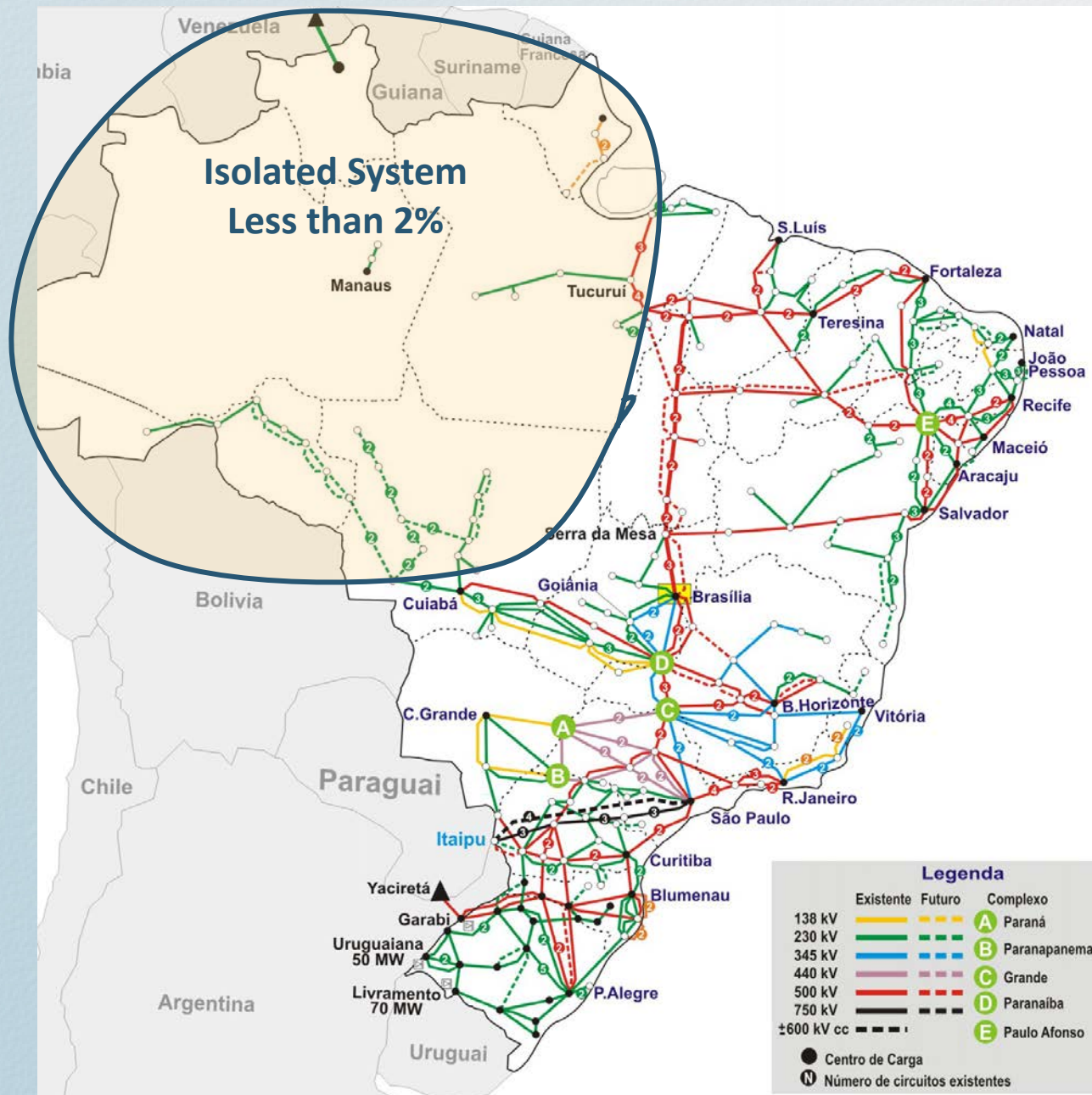
Source: Prepared by FIESP based on IEA (2009)

HYDROELECTRIC REGIONAL POTENTIAL

Total: 590 GW

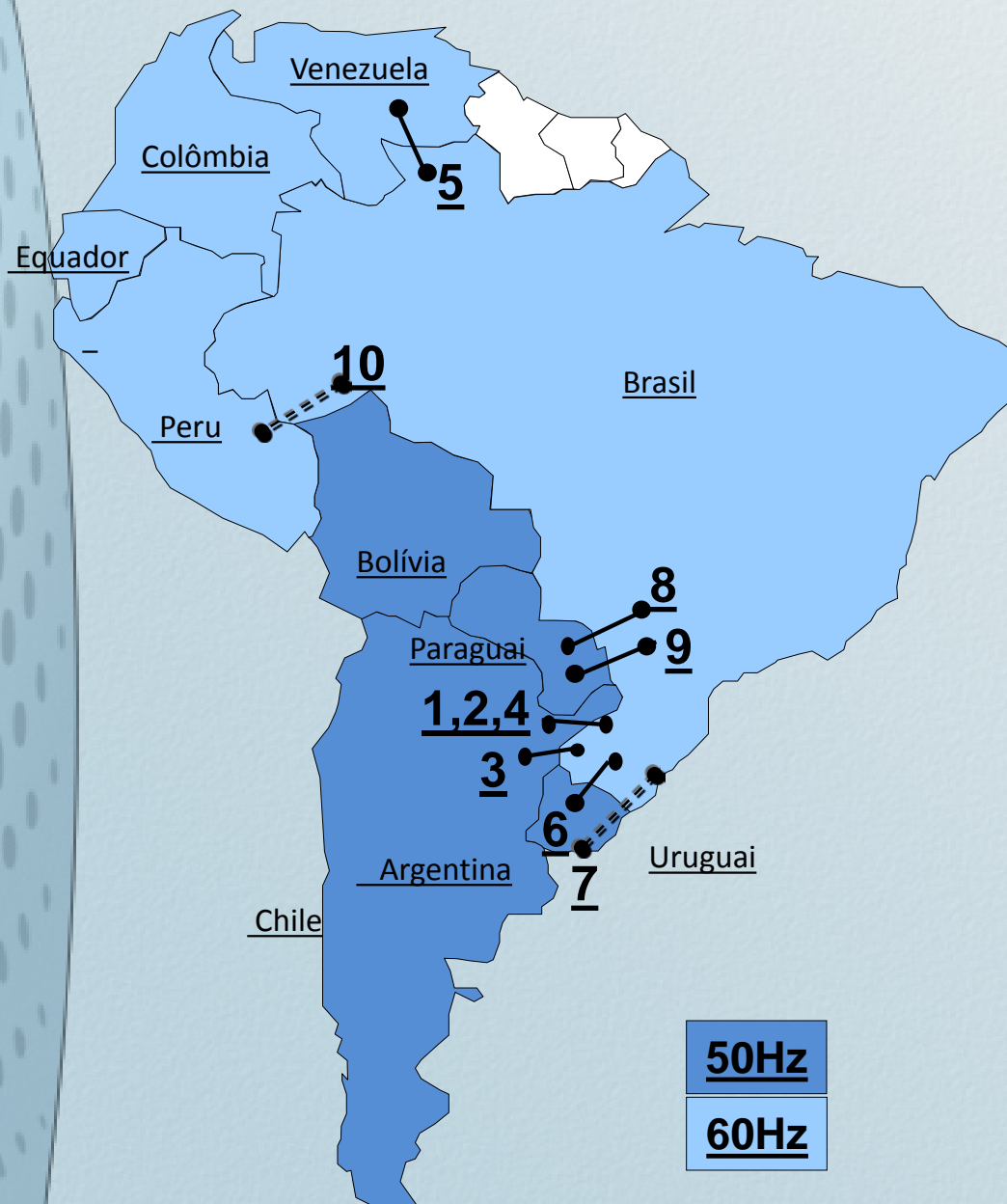


BRAZILIAN POWER GRID



Source: ONS 2009

REGIONAL ELECTRIC POWER INTEGRATION



Interconnection	Situation	MW
Argentina		
1. Garabi I	Working	1018
2. Garabi II	Working	1160
3. Uruguiana	Working	50
4. UHE Garabi	In study	1200
Venezuela		
5. Boa Vista	Working	200
Uruguai		
6. Rivera	Working	70
7. San Carlos	In study	500
Paraguai		
8. Foz Iguacu	Working	50
9. Itaipu	Working	6300
Peru		
10. Projetos Hidro	In study	7564

Source: ONS 2009

BIOFUELS IN BRAZIL

Production:

22 billion liters
of ethanol in 2011

Use of sugarcane ethanol:
E20 and Flex Fuel Technology

Flex Fuel vehicle producers



Production:

2.6 billion liters
of biodiesel in 2011

5% of Biodiesel blend
Since 2010

BIOFUELS IN SOUTH AMERICA

Ethanol Mandates

Argentina	5%
Bolivia	-----
Brazil	20%
Colombia	10%
Chile	2-5%
Ecuador	10%
Paraguay	18-24%
Peru	7,8%
Uruguay	-----

Biodiesel Mandates

Argentina	5%
Bolivia	2,5%
Brazil	5%
Colombia	7-10%
Chile	2-5%
Ecuador	2,5%
Paraguay	5%
Peru	2%
Uruguay	2%

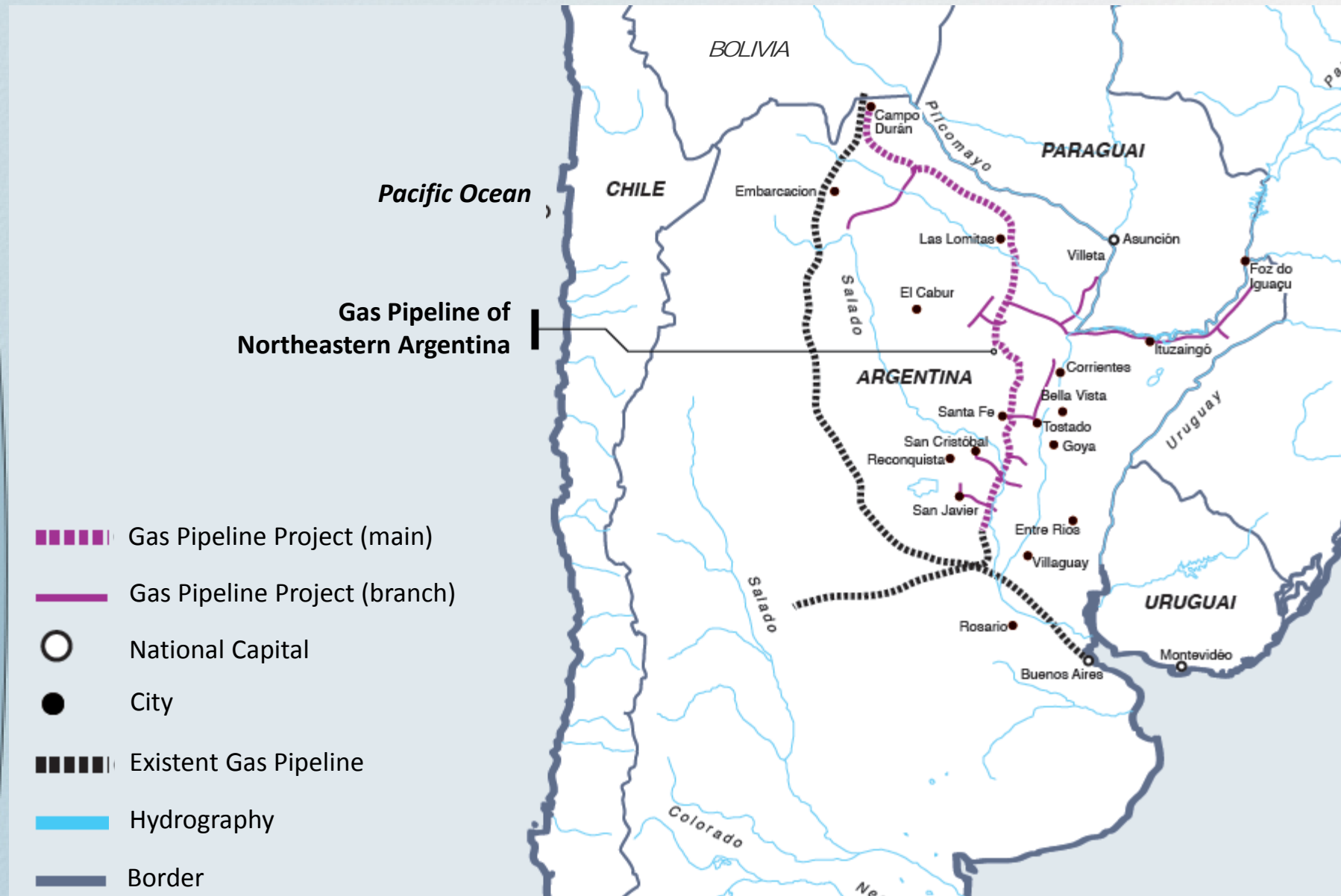
NATURAL GAS

SHALE GAS PERSPECTIVES



	Proved Natural Gas Reserves	Technically Recoverable Shale Gas Resources
	<i>(trillion cubic feet)</i>	
Venezuela	178.9	11
Colombia	4.0	19
Argentina	13.4	774
Brazil	12.9	226
Chile	3.5	64
Uruguay		21
Paraguay		62
Bolivia	26.5	48

GAS PIPELINES INTEGRATION



PRE-SALT

Total Depht

from

5000 m

to

7000 m



PRE-SALT

Water Depth

Pos Salt:
ranging from

±1900

Salt layer:

±2400

meters



Pre Salt
Reserves:

Up to
120
billion barrels





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