



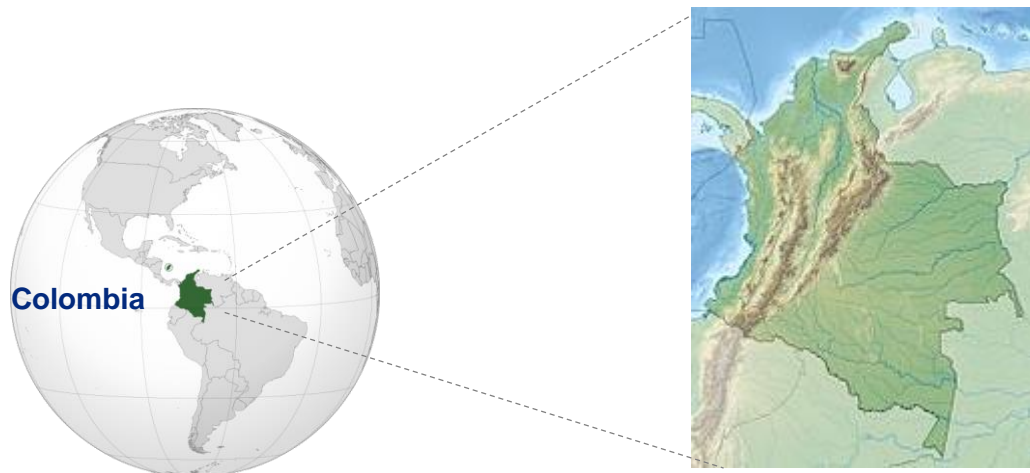
Colombian Regulatory Framework

Analyst Update Meeting

June 2017



General View



Population Colombia: 48,23 Million

Population Bogotá: 8,08 Million

President: Juan Manuel Santos (2010-2018)

Effective Capacity – 2016

Hydro: 70%

Thermal: 29%

Others: 1%*

Energy Production – 2016

2016^{**}: 65,942 GWh (Δ -0.9%)

2015: 66,548 GWh

Hydro: 71%

Thermal: 28%

Others: 1%*

Net Effective Capacity: 16,676 MW

Transmission

2016: 15.108 km

Peak Demand^{***}

2016: 9,904 MW (Δ -1.9%)

2015: 10,095 MW

*Others include wind, biomass and biogas.

**Energy demand decreased due to the Government's campaign (Apagar Paga), during El Niño Event and the economic growth.

***Peak demand in December.

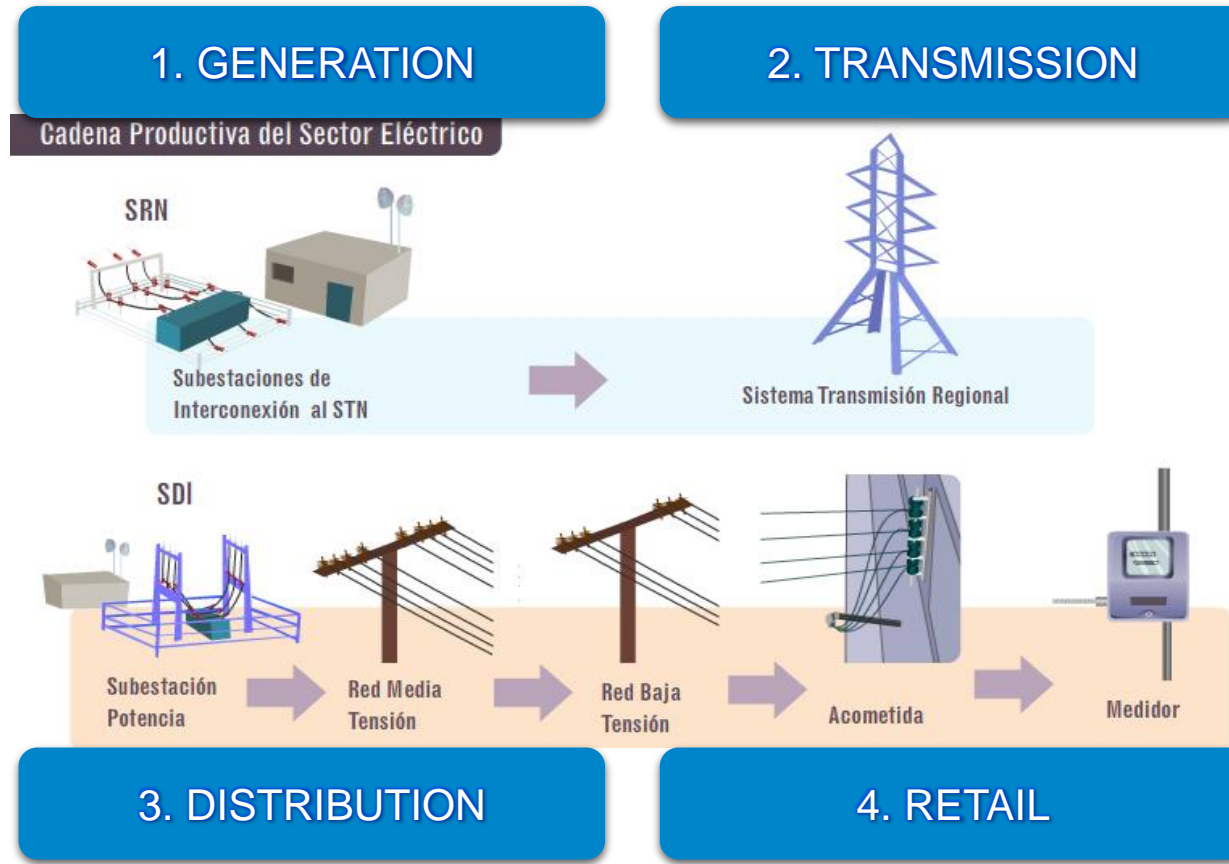
Source: XM

Structure of the Electric Sector



- Electricity production.
- Hydro, thermal and renewable centrals, among others.
- Competitive market.

- Electricity transportation through Regional Transmission System and Local Distribution System.
- Regional monopolies → regulated income with efficiency and quality incentives.
- Distributors are responsible of expansion and coverage.

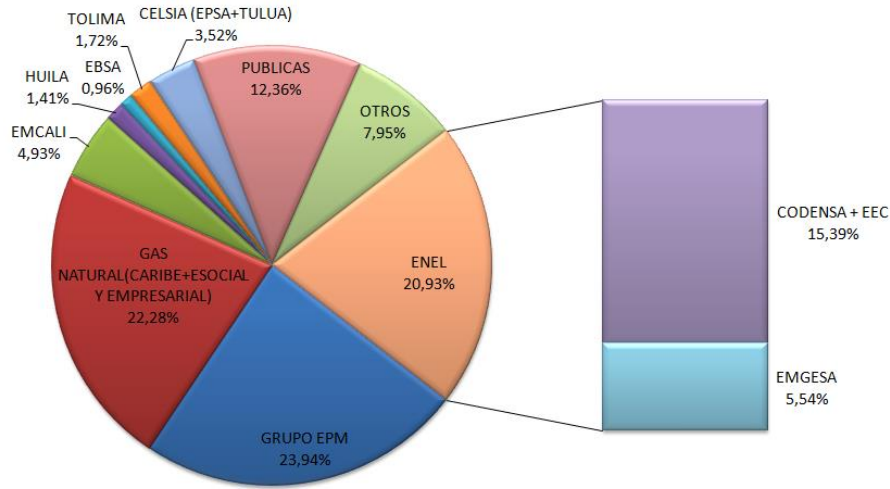


- Electricity transportation the Nation Interconnected System.
- Natural Monopoly.
- Intermediation between the market participants and the customers of the services to regulated and un regulated users.
- It can be carried out with other electricity-sector activities.
- Sales
 - 68.5% Regulated
 - 31.5% No Regulated

Enel Market Share

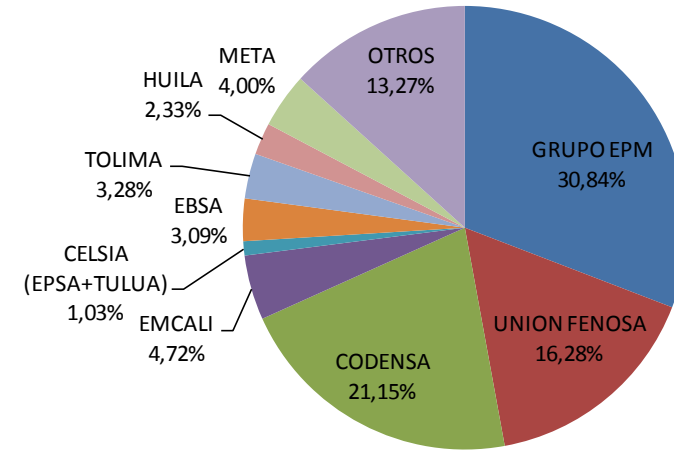


Retail – kWh Sales



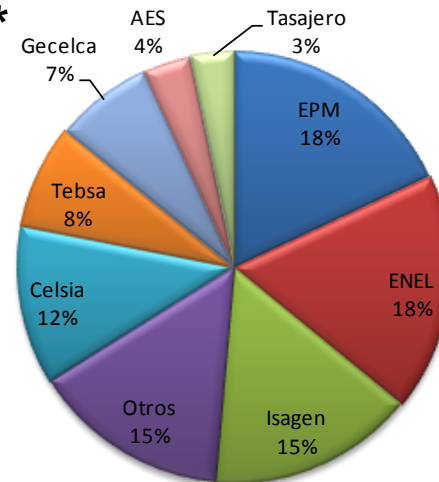
Source: XM 2016

Distribution - Clients



Source: SUI 2016

Generation*



Source: XM 2016

* Calculated in Firm Energy

Institutional Context



National Constitution

Laws

Decrees

Resolutions

Law 142 1994

Domiciliary Public Services Law

It establishes the regime and criteria for the provision of public services in Colombia

Law 143 1994

Electric Law

Establishes the regime for electricity Generation, Interconnection, Transmission, Distribution and Retail.

Energy Policies
Ministry of Mines and Energy



MinMinas
Ministerio de Minas y Energía

Planning
Energy and Mines Planning Unit – UPME



Regulation
Energy and Gas Regulatory Commission – CREG



Compliance
Public Utilities Superintendence – SSPD
Industry and Commerce Superintendence- SIC



Advisors
Operation National Council– C.N.O.
Retail Advisory Committee- CAC

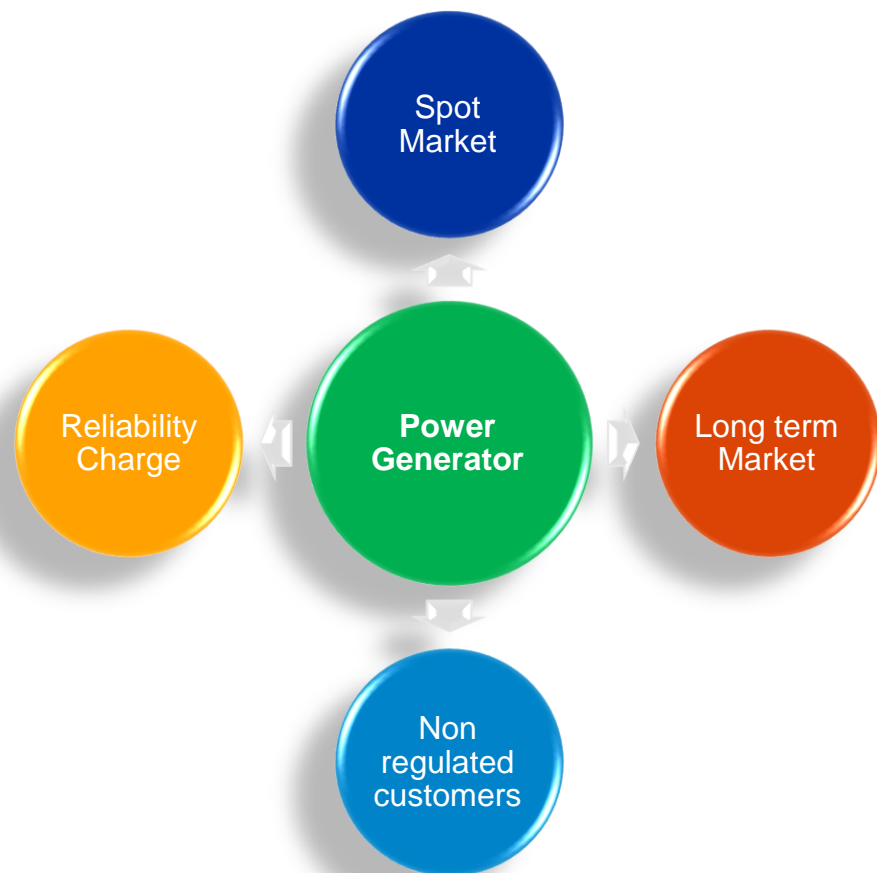


System Administration and Operation
System Operator- XM



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Wholesale Energy Market Structure



Daily auctions in which generators **offer prices** and declare the plants availability. The market dispatch as well as the system operation depends on the competition between those offers.

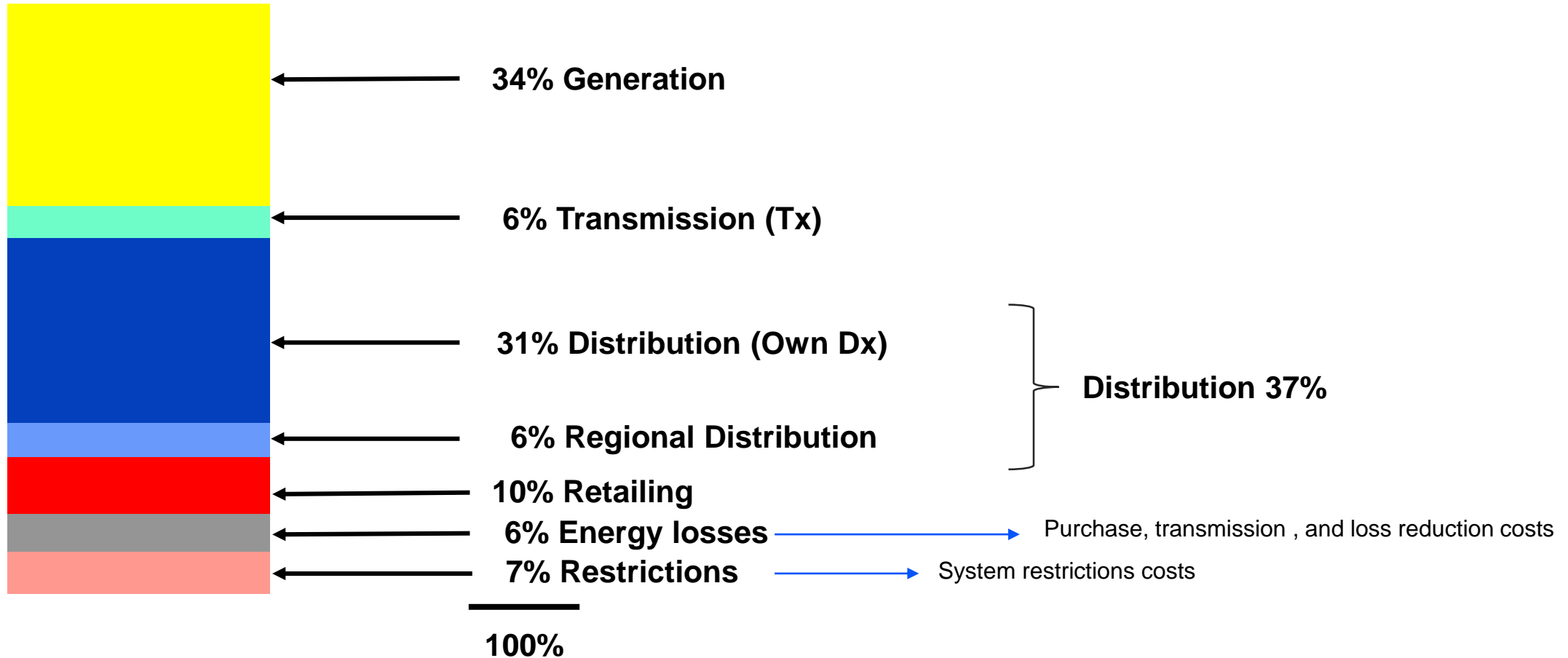
Generators and retailers sell and buy energy through long term financial contracts.

Non regulated customers represented by retailers can negotiate energy contracts freely with generators.

Generators receive the reliability charge, according to the Firm Energy Obligations each plant has with the market. Through auctions, new plants can access this charge for at least 20 years. Existing plants are assigned according to their participation in the system's total firm energy.

Tariff structure

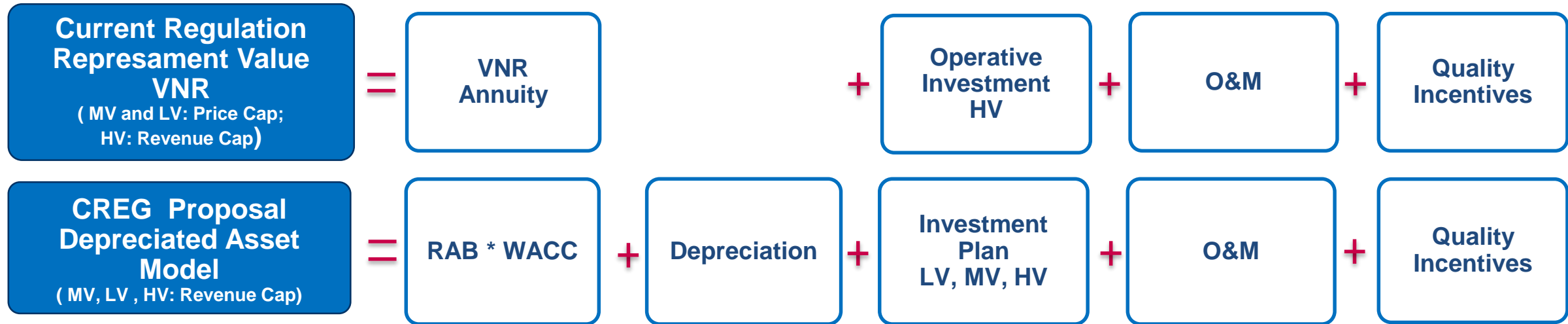
Residential tariff (May-17): US\$154/MWh for a 200 KWh / month customer



In addition subsidies -60%, -50%, -15% and contribution +20% policies apply.

Distribution Regulatory Framework

Main aspects of ongoing Tariff review (Res CREG 019/17)



Regulatory Asset Base

- Net Regulatory Asset Base (Net RAB), according to Remaining Capital Factor (-11%)
- WACC 13.1%+CREE, includes income tax path
- Regulated Income includes depreciation of assets and investment plan.

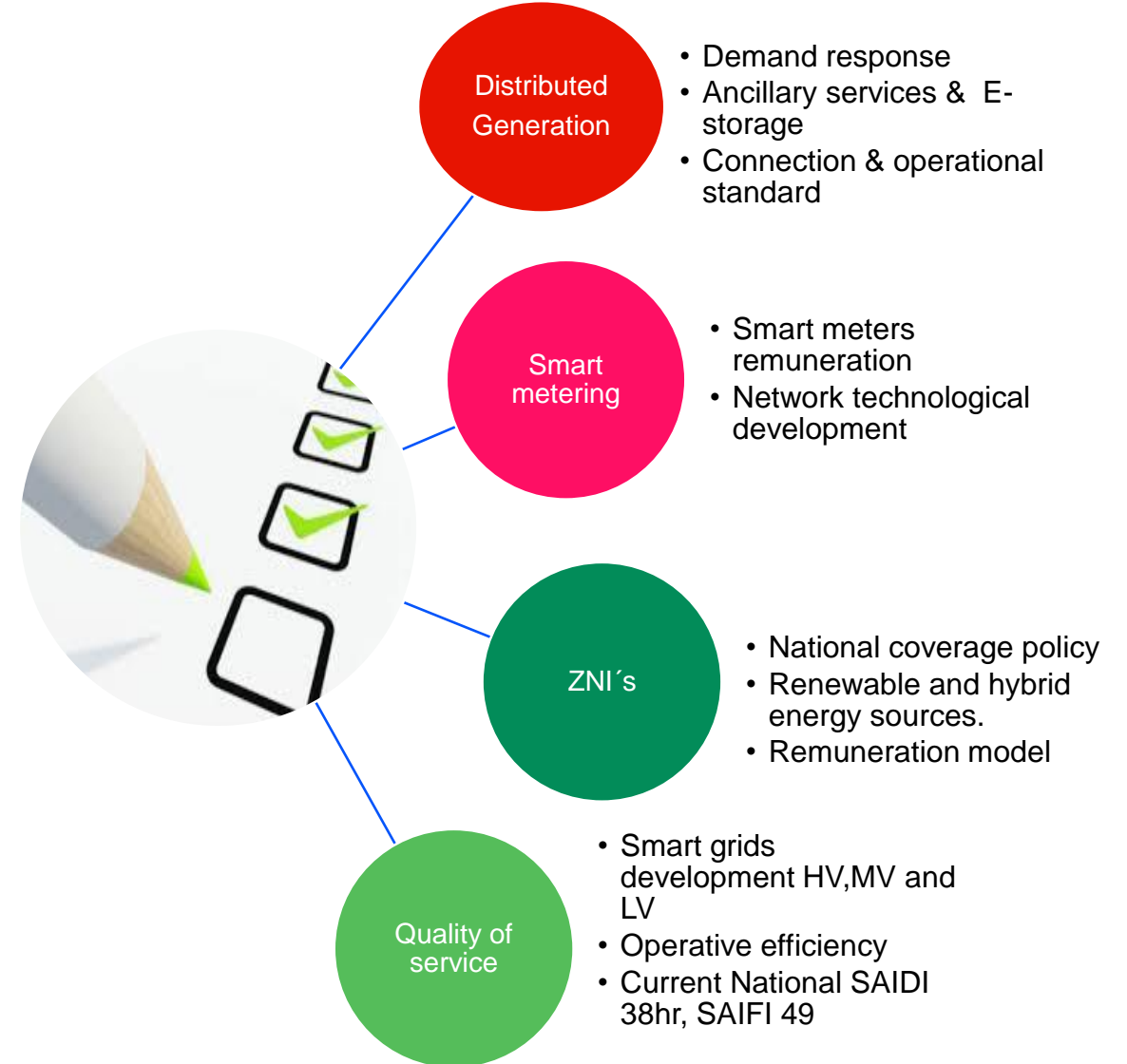
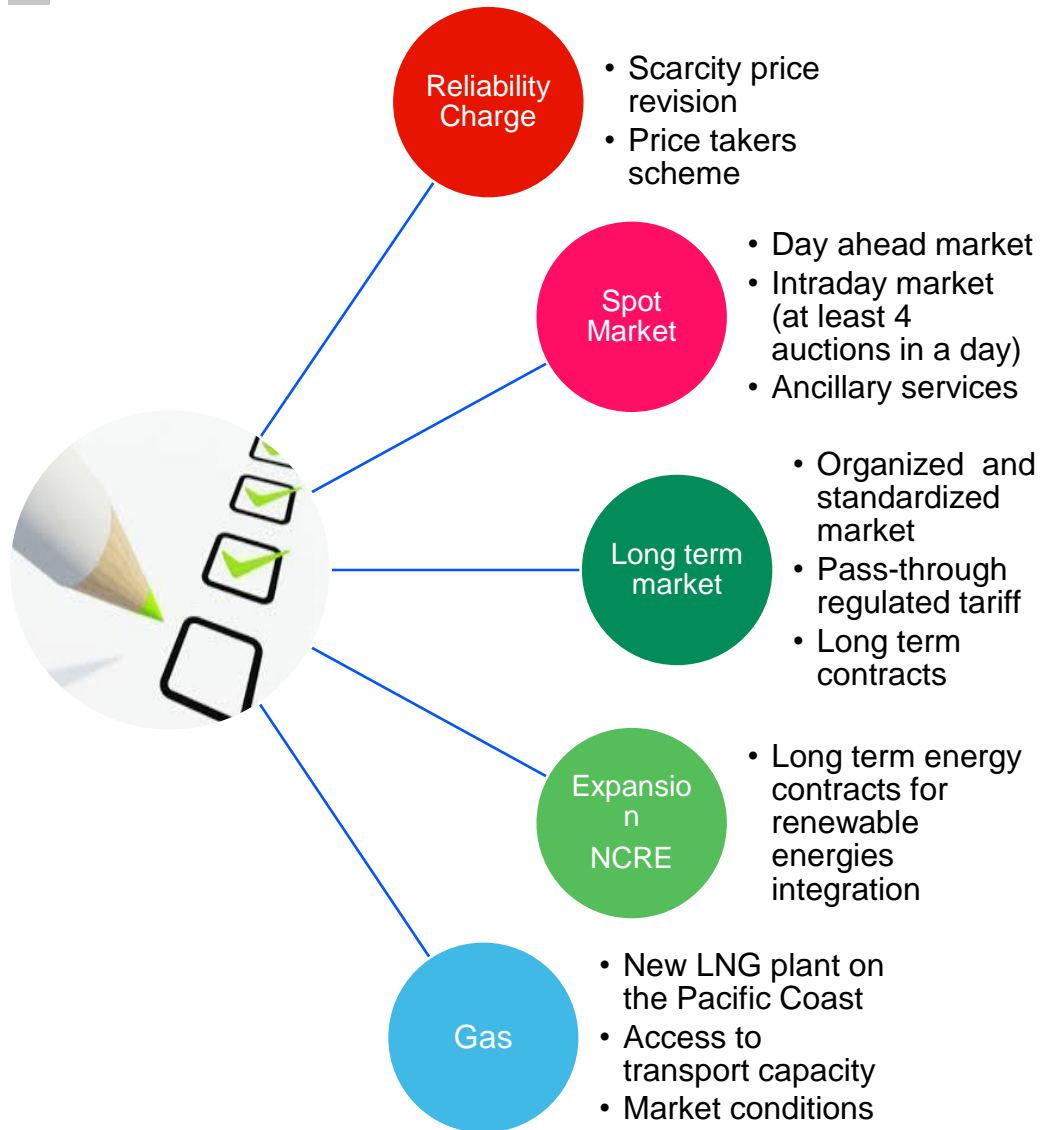
Investment Plan

- Investment Plan: Annual planned assets of a 5Y plan are included in RAB. Maximum 8% of the Gross Asset Base (excluding HV investment).
- First year anticipated income.
- WACC 13.1%

O&M and Quality

- **O&M**:
 - AOM of Current asset base: average of historical remuneration (2009-2014).
 - New investment: 4% Level 1,2, 2% Level 3,4
- **Quality**: annual reduction target 8%. Reference avg. SAIDI, SAIFI 2013 to 2016. Quality incentives & compensations.

Hot topics



Thank you

