A Roundtable Discussion on "Addressing Nigeria's Power Problems"

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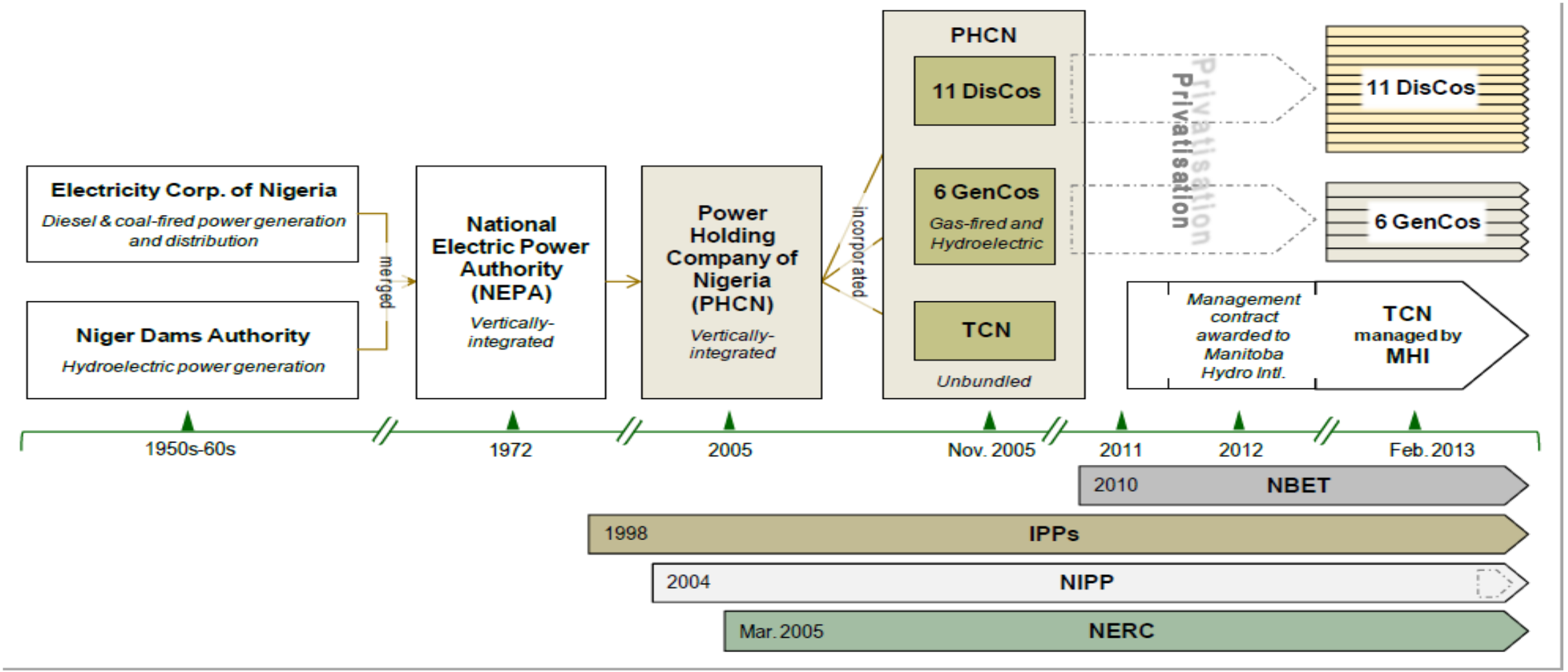
Evolution of Nigeria's Electricity Supply Industry



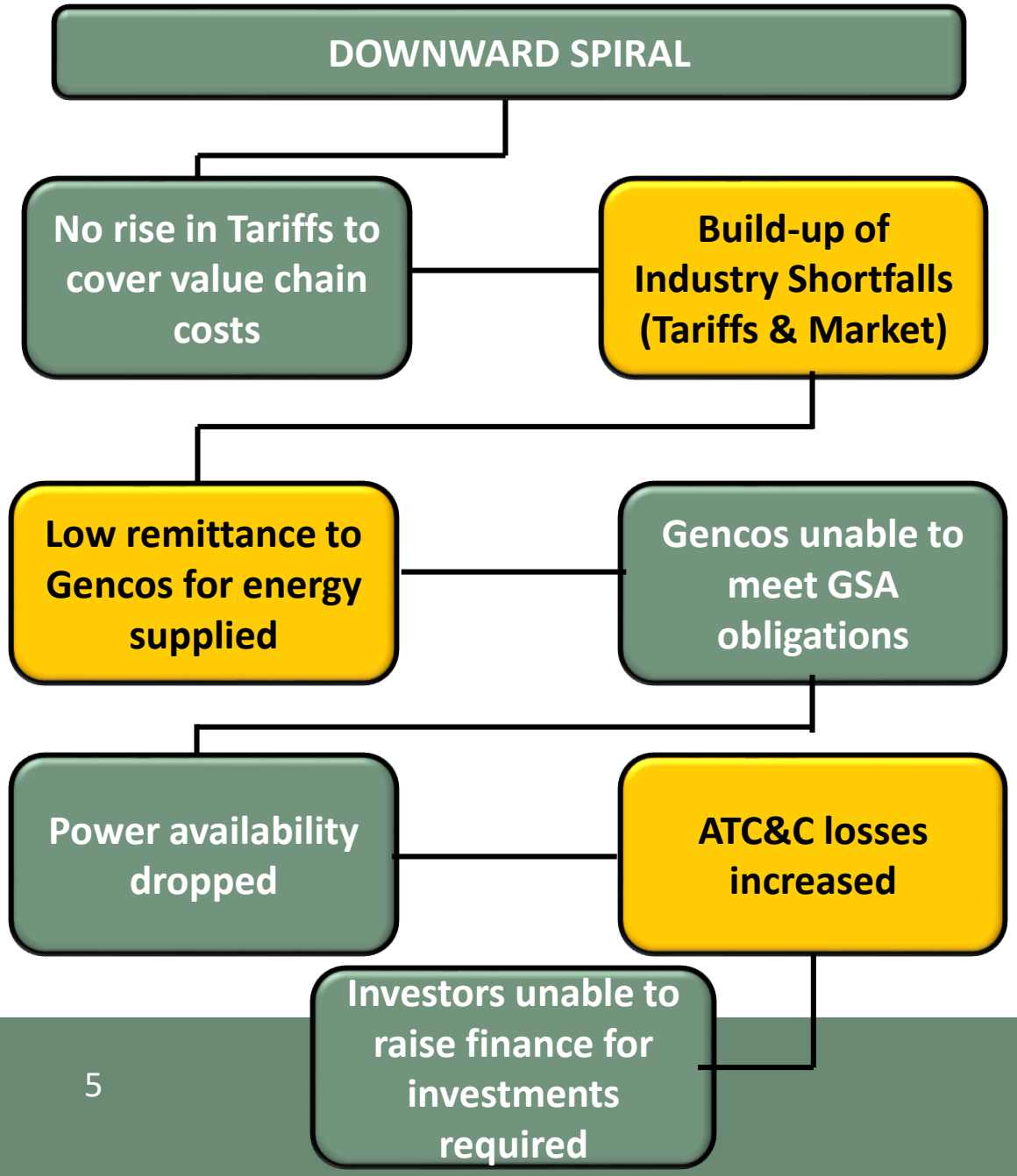
Source: CSL Research

Power sector reform mainly driven by…

- The growing demand for stable and reliable power requiring **significant investment** in the sector;
- The need for **improvement in the efficiency** of the distribution, generation, and transmission network which was in a comatose state
  - Reduction of Aggregate Technical Commercial & Collection (ATC&C) Losses;
  - Achievement of grid stability and reliability;
  - Achievement of generation adequacy; and
  - Diversification of energy mix

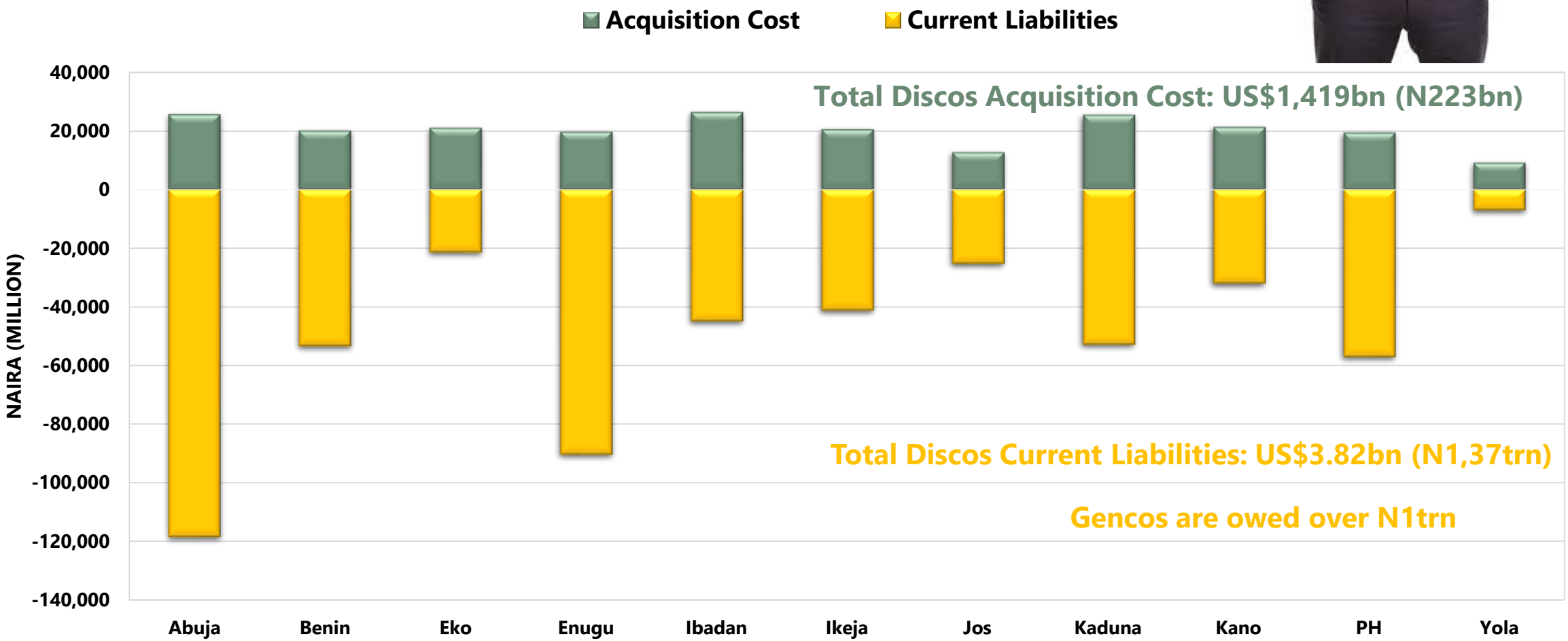
The Assumptions in 2013 had fatal flaws

Metric	2012 Assumptions – MYTO 2	Handover-2013	2019
Avg. Capacity Supplied	6,500MW	4,700MW	3,453MW
Customer Population	7.3Million	6.7Million	8.8Million
Subsidies (N)	N100bn	N0bn	N??bn
ATC&C Losses (%)	21.4%	50-60%	52.4%
FOREX (NGN/USD)	157	157	360

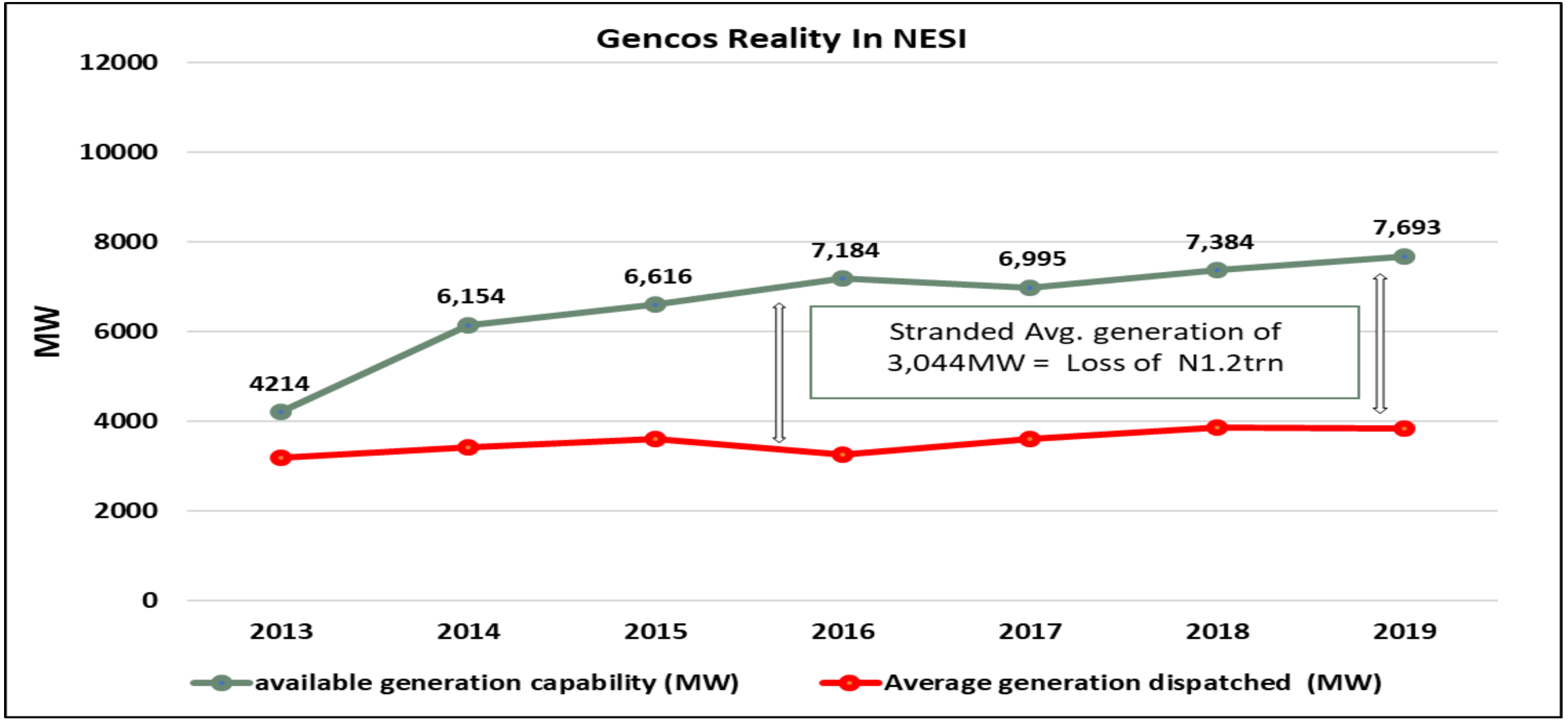


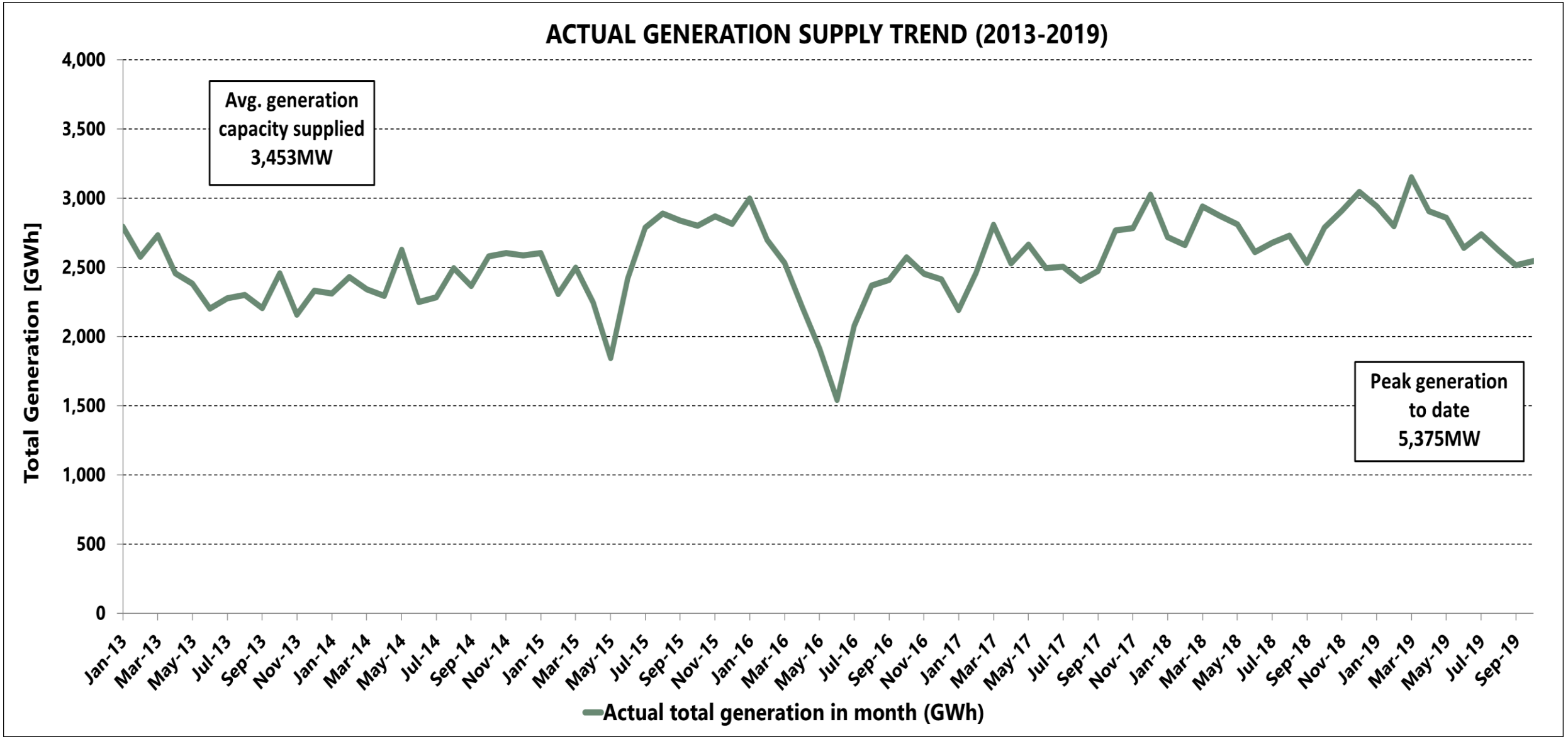
- This situation has led to…
  - mutual distrust, and
  - buck-passing that has continued to the present
- The original legal/regulatory framework was reasonably sound, if the rules had been followed, but many distortions have since appeared:
  - unlikely that the long list of 'Issues' from Gencos, Discos and others can be solved by FGN/BPE/NERC
- It has to be **a collaborative effort of all stakeholders with a singular direction and commitment to make NESI work!**

NESI Financial Performance

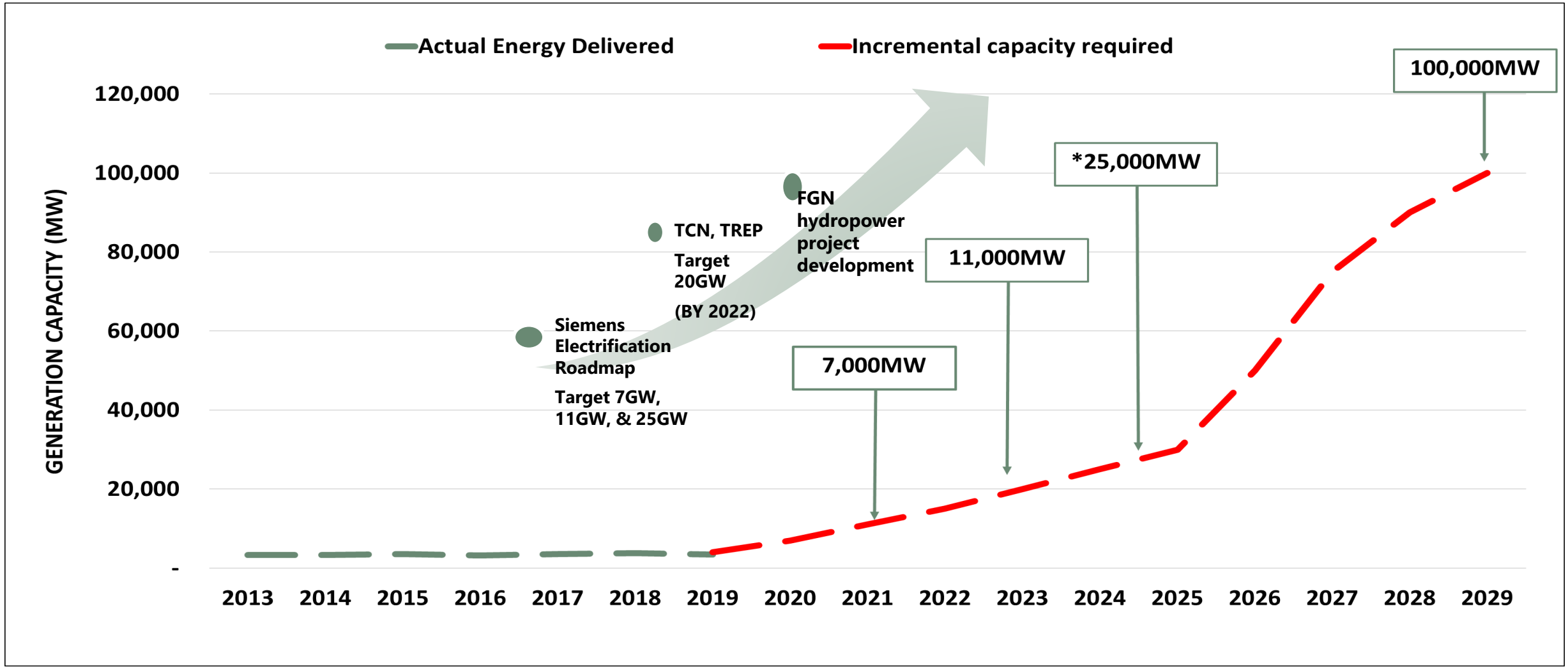


Generation loss in revenues …



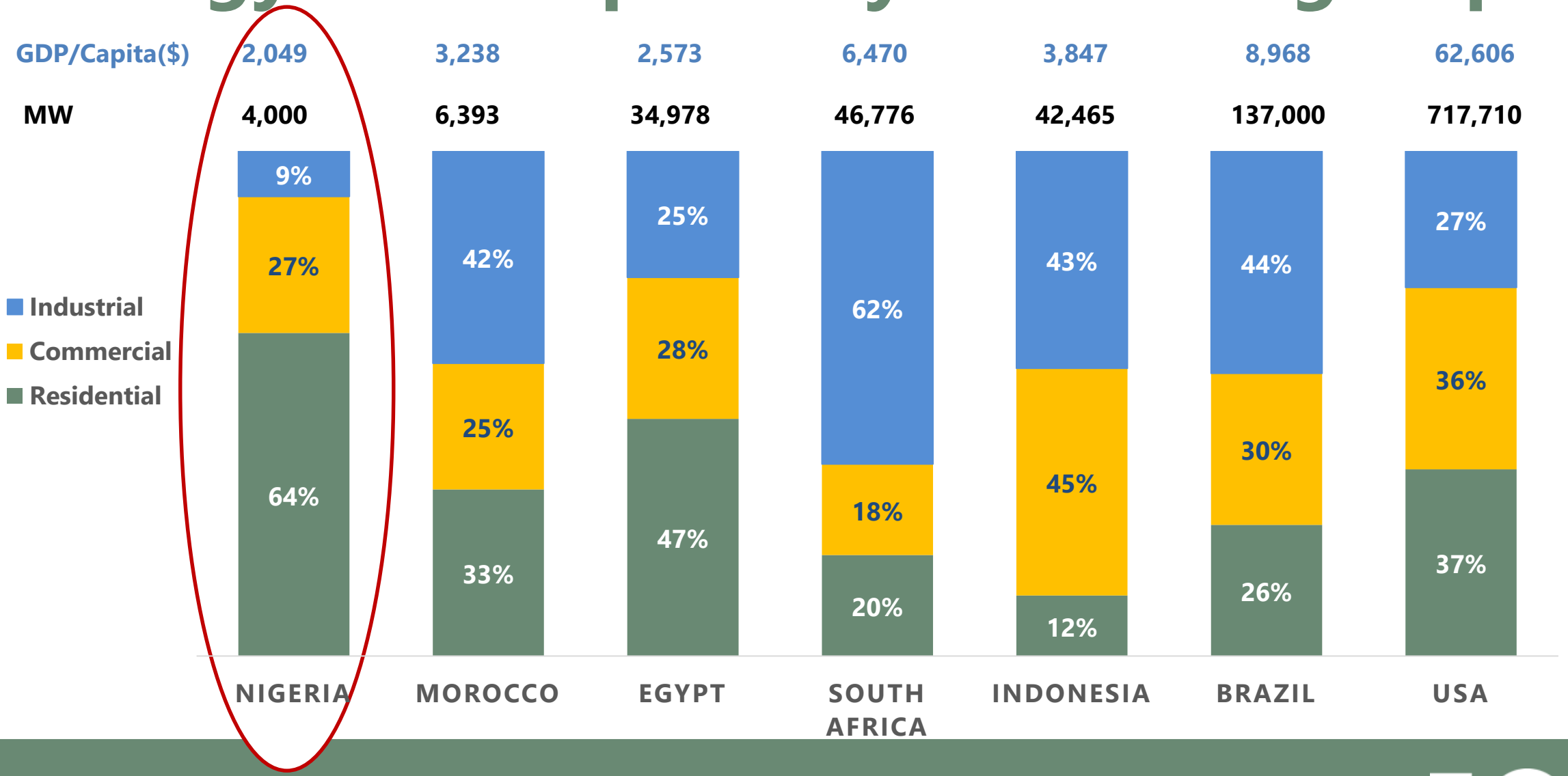


Source: NCC daily operational report

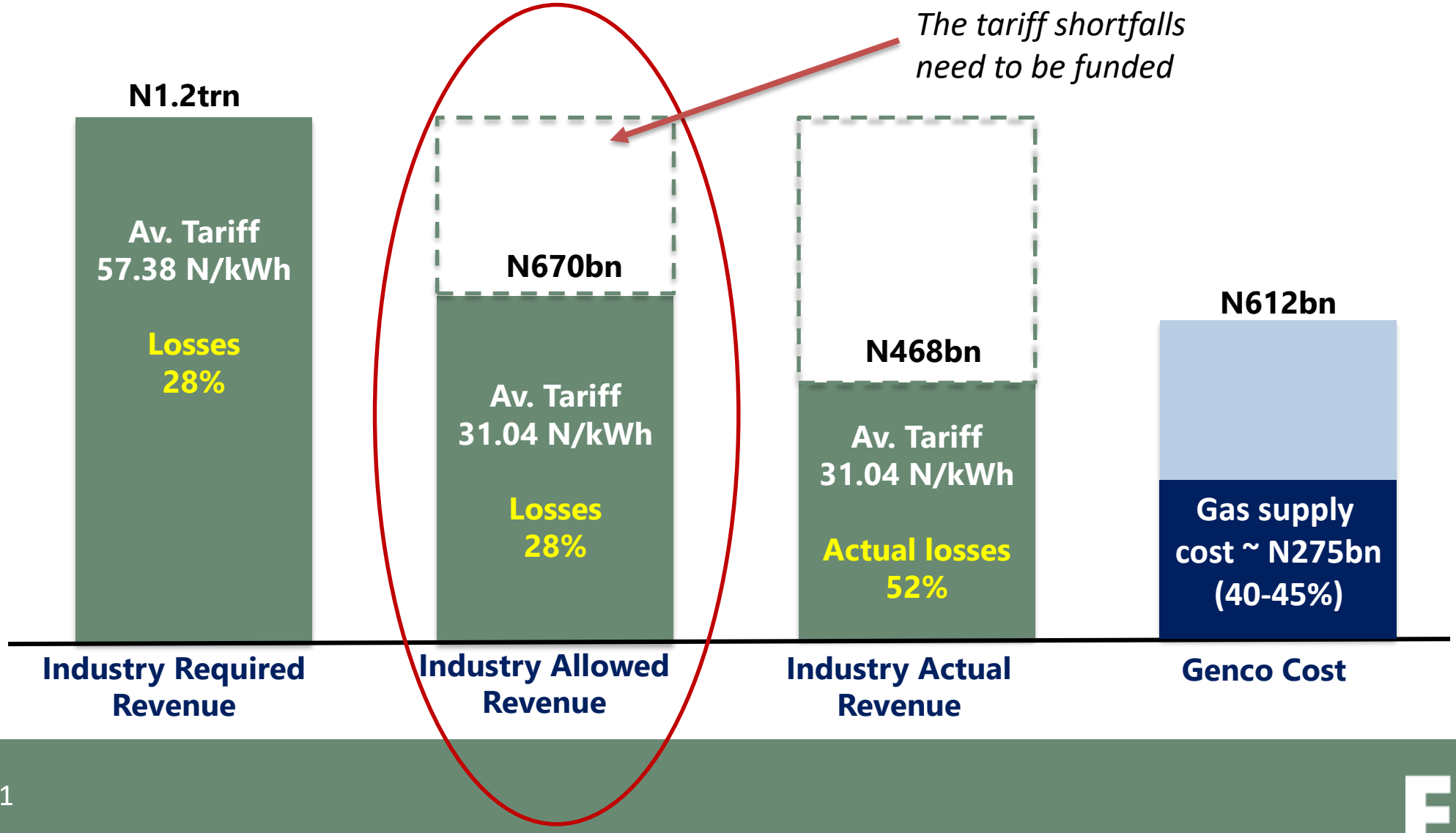


**Peak Demand Forecast (Connected + Suppressed Load), NCC daily operational report*

Energy consumption by customer group



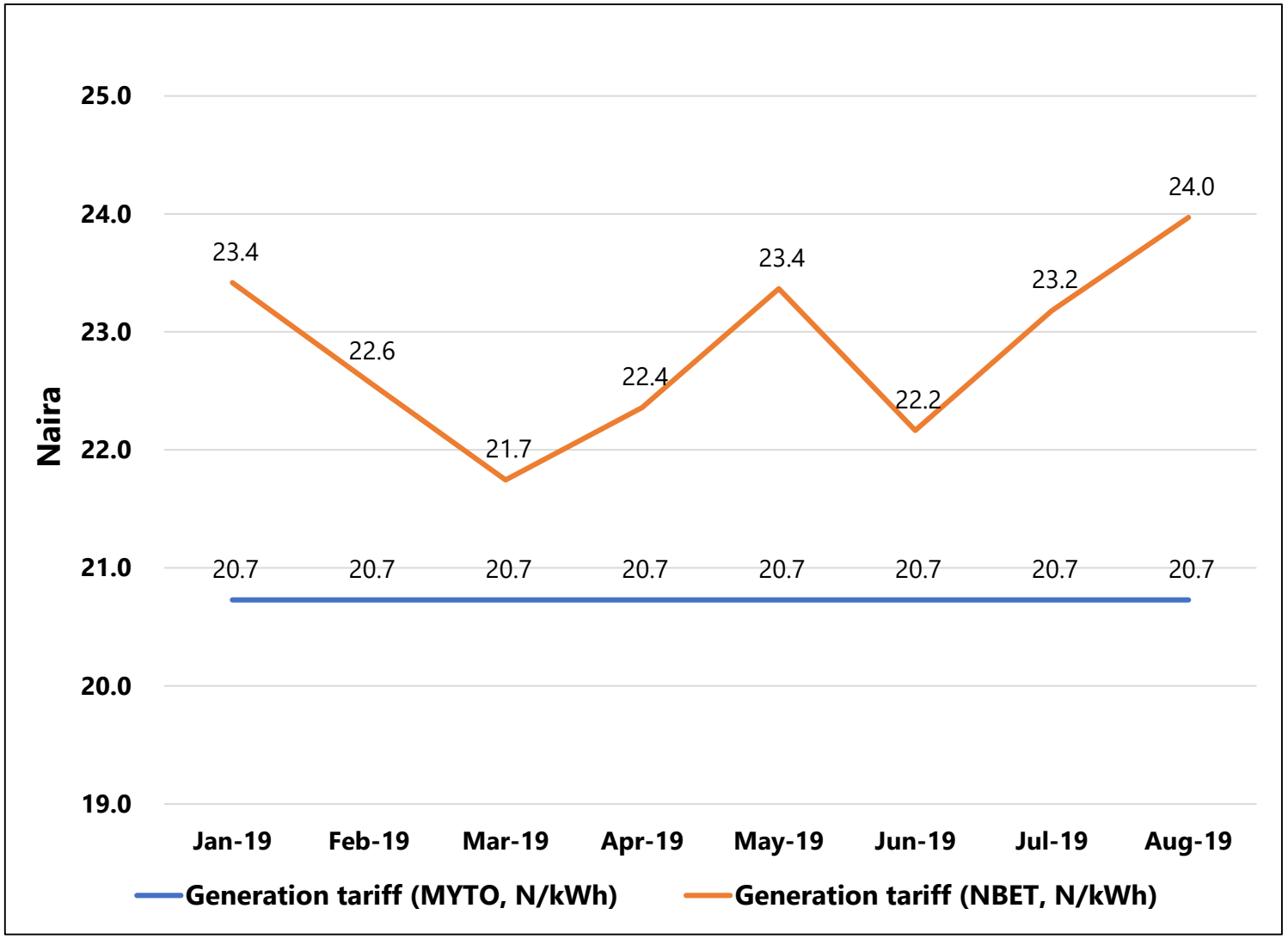
Revenue for 4,000MW (2019)



Demography of Revenue Billed …

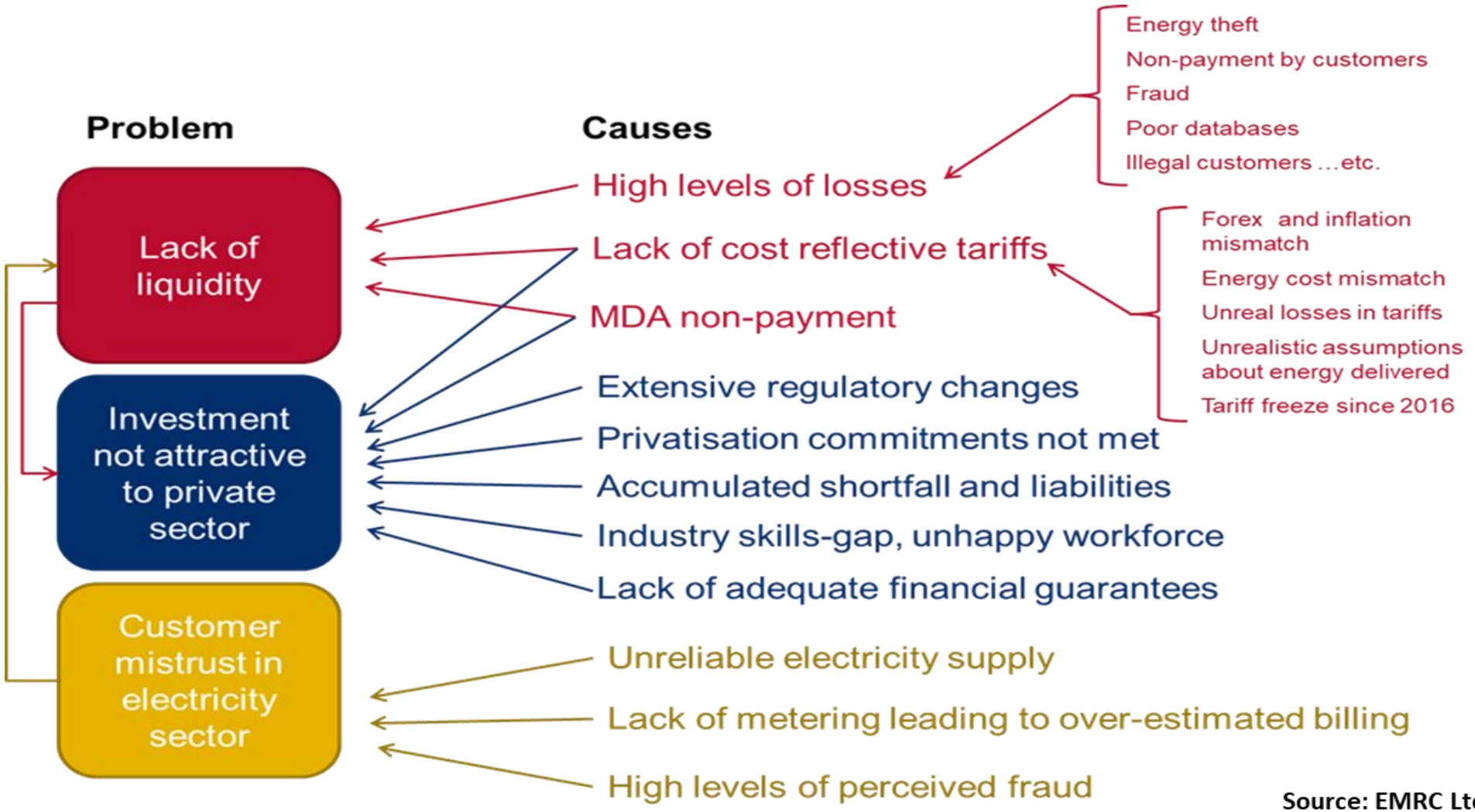
	2019	2024	2024 (at Egypt's Industrial base)
Capacity (MW)	4,000	25,000	25,000
₦ Revenue Allowed (Nbn)	670	2,000	2,000
₦ Revenue Billed to **Industrial** (Nbn)	98 (15%)	288 (14%)	498 (25%)
₦ Revenue Billed to **Commercial** (Nbn)	142 (21%)	409 (21%)	558 (28%)
₦ Revenue Billed to **Residential** (Nbn)	431 (64%)	1,295 (65%)	936 (47%)

NBET Tariff vs Discos allowed Tariff



- The average NBET generation tariff for 2019 is N22.8/kWh; N2.1 N/kWh higher than MYTO provisions .
- NBET tariff is impacted by;
  - FOREX
  - Low generation
  - Energy & capacity charges
- **Discos are out-of-pocket** until the bi-annual minor reviews are done

NESI Challenges in a nutshell!



Source: EMRC Ltd

Sub-sector key issues …

Generation

- Revenue assurance – poor remittance (avg. 28%)
- Lack of effective payment security & guarantees to backstop PPA payments
- Gas constraints (pricing & availability)
- Grid impact (low dispatch & grid inefficiency) on Gencos power plants
- Increased costs to Gencos not covered by MYTO
- Forex related issues (Opex & Capex)
- Absence of securitisation for legacy & NIPP Plants
- NBET efficiency factor imposed not passthrough

Transmission

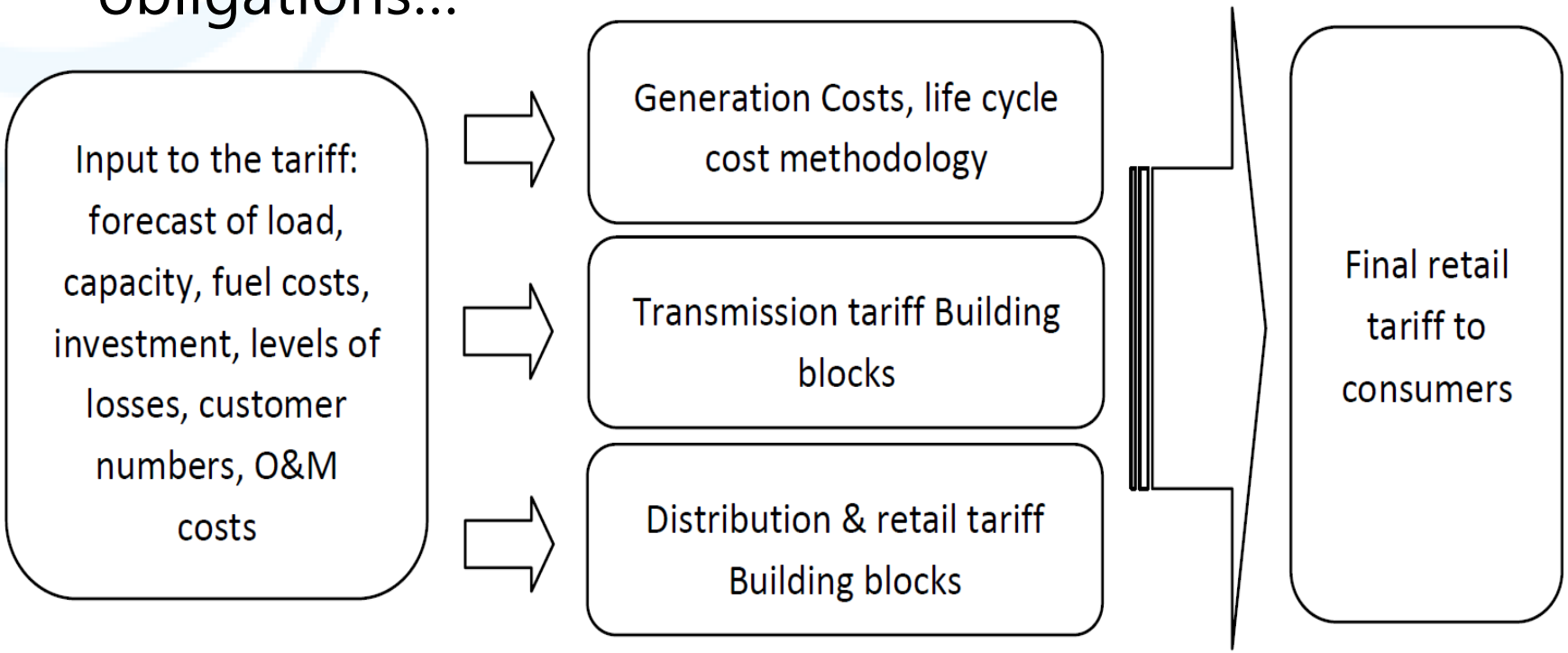
- Lack of spinning reserve (400MW) – 9 TSC & 1 partial (2019)
- Interface issues with Discos; load alignment
- Inadequate transmission capacity and stability (TREP)
- Poor system/dispatch planning (TREP)
- Lack of integrated resource planning
- Right Of Way settlements; need for FGN counterpart funding for ESIA
- Vandalism of towers and transmission lines
- Poor connection of distribution assets to TCN network
- Lack of SCADA

Distribution

- Non cost-reflective tariffs / funding of tariff shortfalls
- Misalignment in energy cost
- Misalignment in ATC&C losses
- Collection inefficiency (collection losses) and energy theft (commercial losses)
- Low power supply
- Low remittance levels
- No access to finance for investment
- Metering gap / estimated billing
- Non-payment by MDAs
- Interface issues with TCN; load alignment required
- Lack of injection substations /SCADA

Liquidity – a Symbiotic Issue!

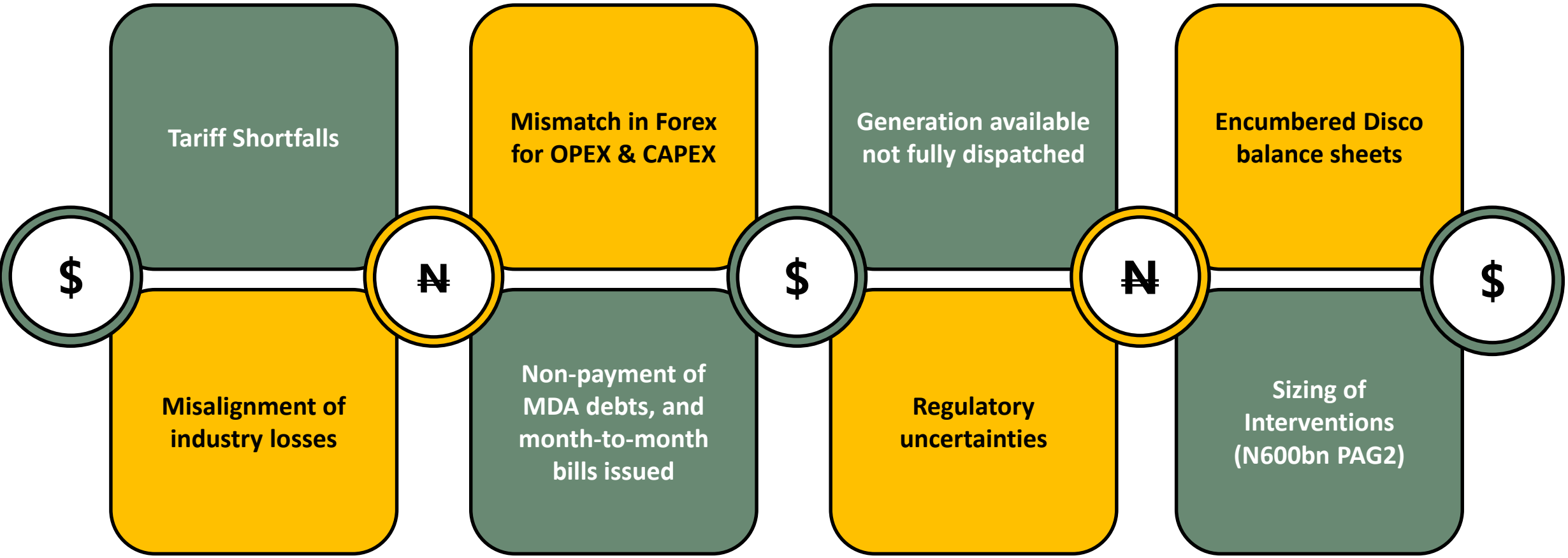
- Discos are not collecting sufficient cash to meet upstream obligations…



Generation Costs not covered in retail tariffs:

- **FGMO** (estimated loss N1.2bn for energy loss & maintenance)
- Huge debts incurred due to take-or-pay risks for **fuel supply & escalation factors** in GSA & GTA
- Unattractive rates for **ancillary services** (N2,250/MWh vs N15,183/MWh)
- **Deemed capacity** not paid for in events of total system collapses

Key Illiquidity causing factors that need to be addressed…



Due to all these factors, payment (market remittance) upstream (Gencos & TCN) & financing investment plans are threatened!!!

Lets Discuss Solutions…

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