



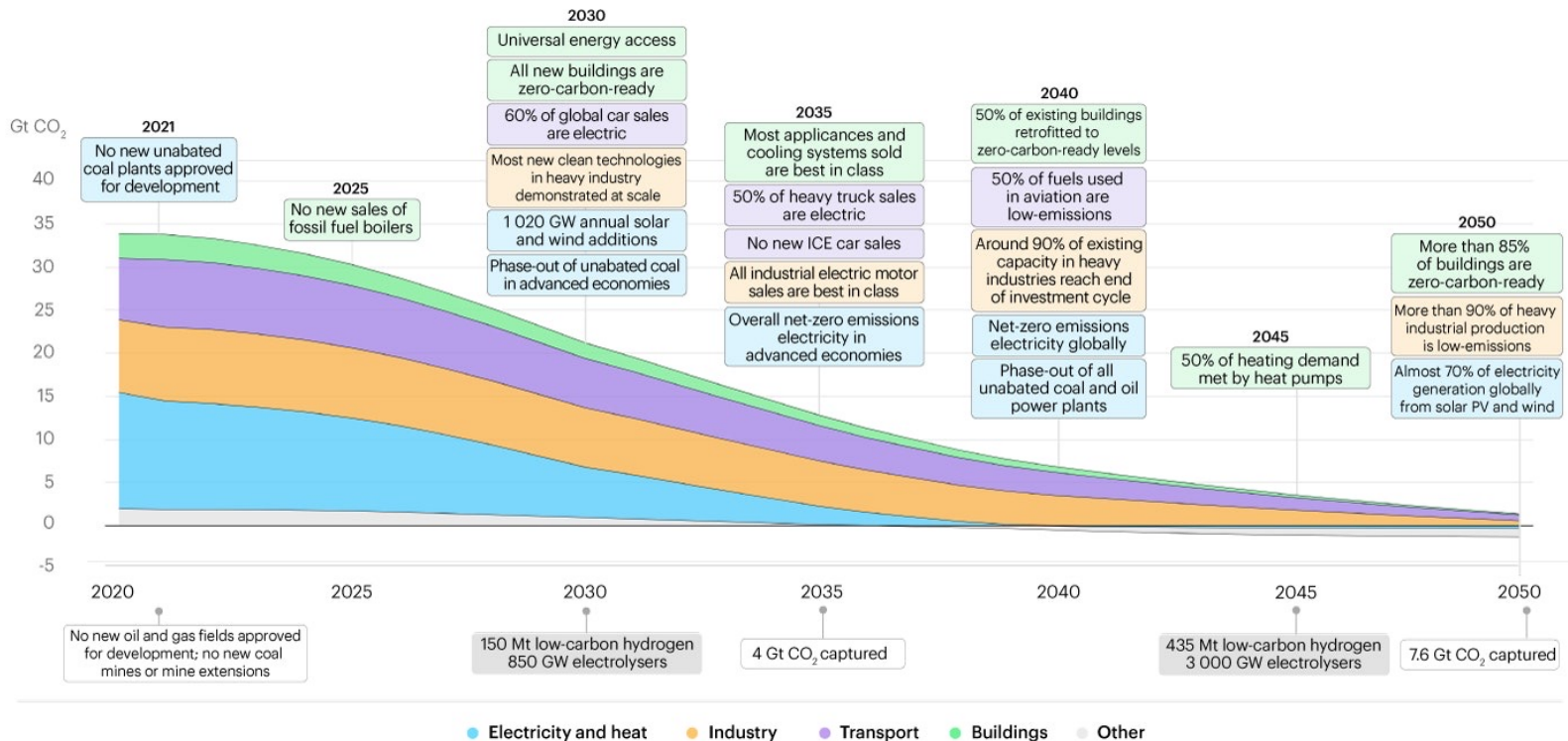
# Digitalising energy

Forum on Sustainable Digital Transformation in the Africa Region

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# Net Zero by 2050 Roadmap

- The IEA's flagship roadmap highlights a pathway with more than 400 sectoral and technology milestones to guide the global journey to net zero by 2050.

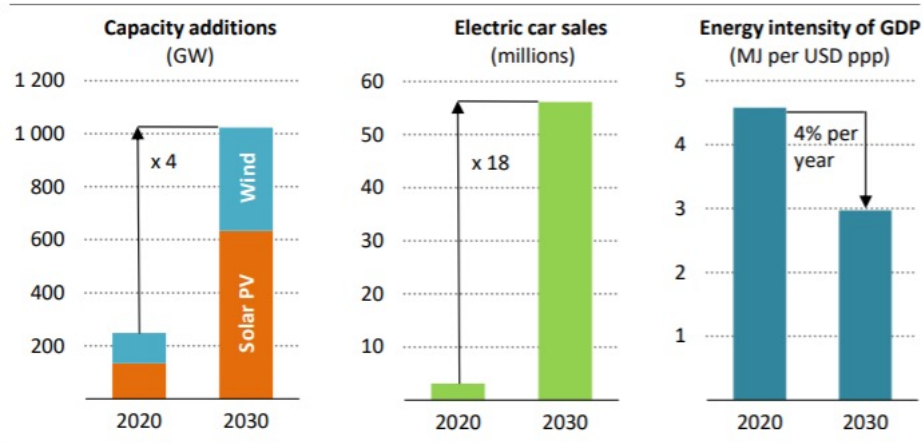


# Energy systems are becoming much more complex

## Net Zero Emissions by 2050 Scenario (NZE) milestones:

- Yearly **wind and solar PV capacity** additions **>1 000 GW** by 2030;
- **100 million buildings** with residential PV by 2030;
- **Universal energy access** by 2030;
- **All new buildings zero-carbon-ready** by 2030;
- **Most cooling system sold are best in class**

## Key clean technologies ramp up by 2030 in the net zero pathway

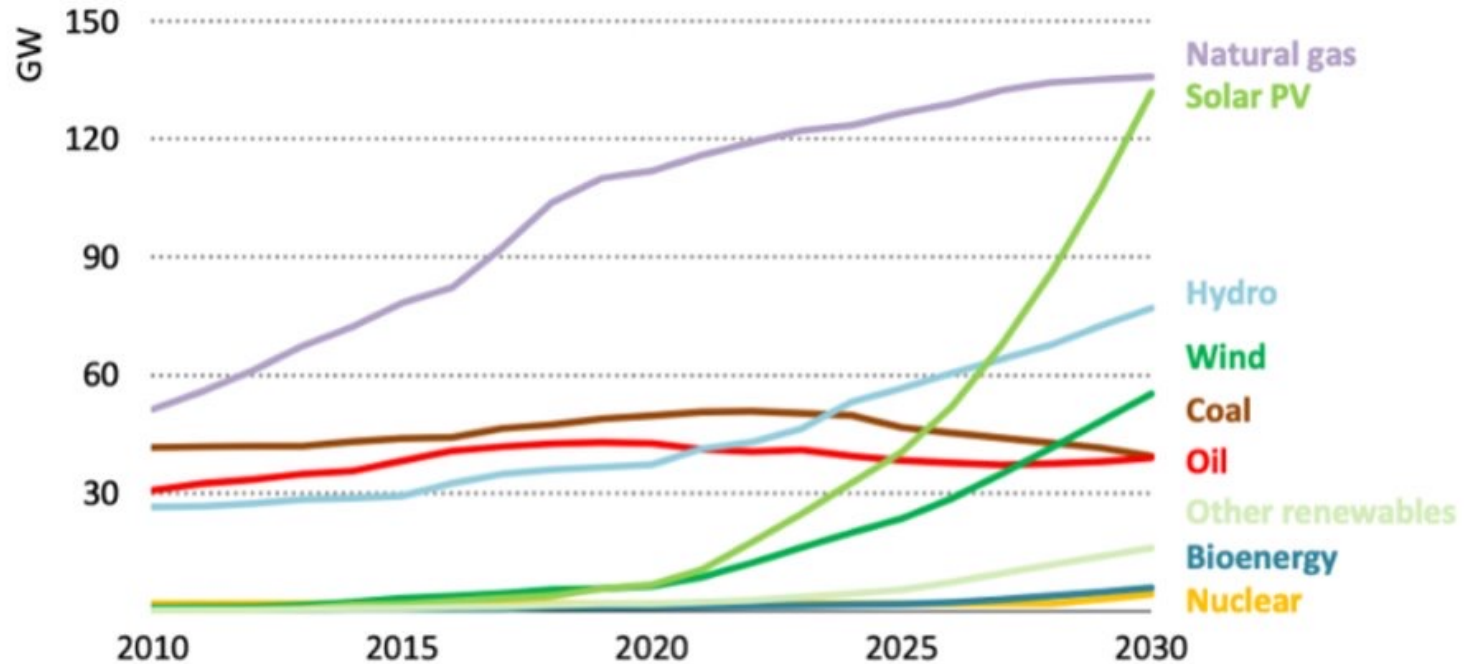


Note: MJ = megajoules; GDP = gross domestic product in purchasing power parity.

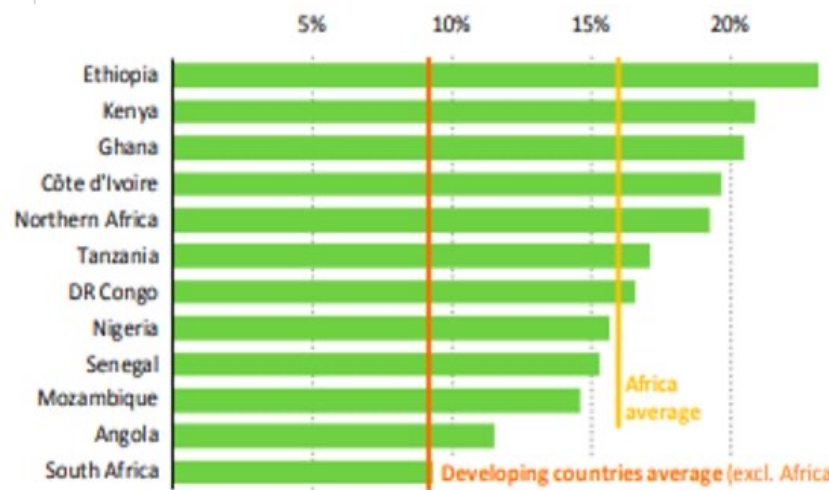
These massive changes will both require and enable more demand-side management. In the NZE:

- **>500 GW** of demand response brought to market by 2030;
- **Tenfold increase** in global inventory of **flexible assets** by 2030, including grid-connected electrolytic hydrogen production;

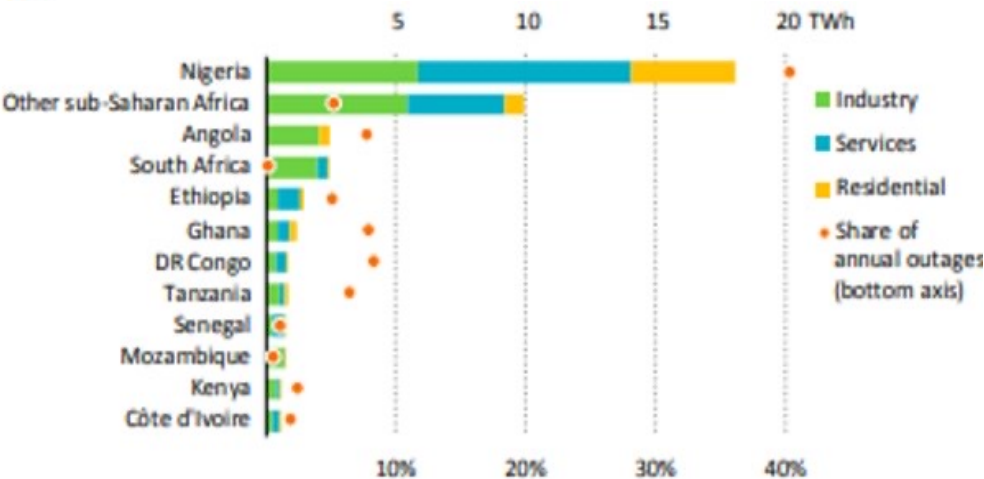
## Installed power generation capacity by source in Sustainable Africa Scenario (SAS)



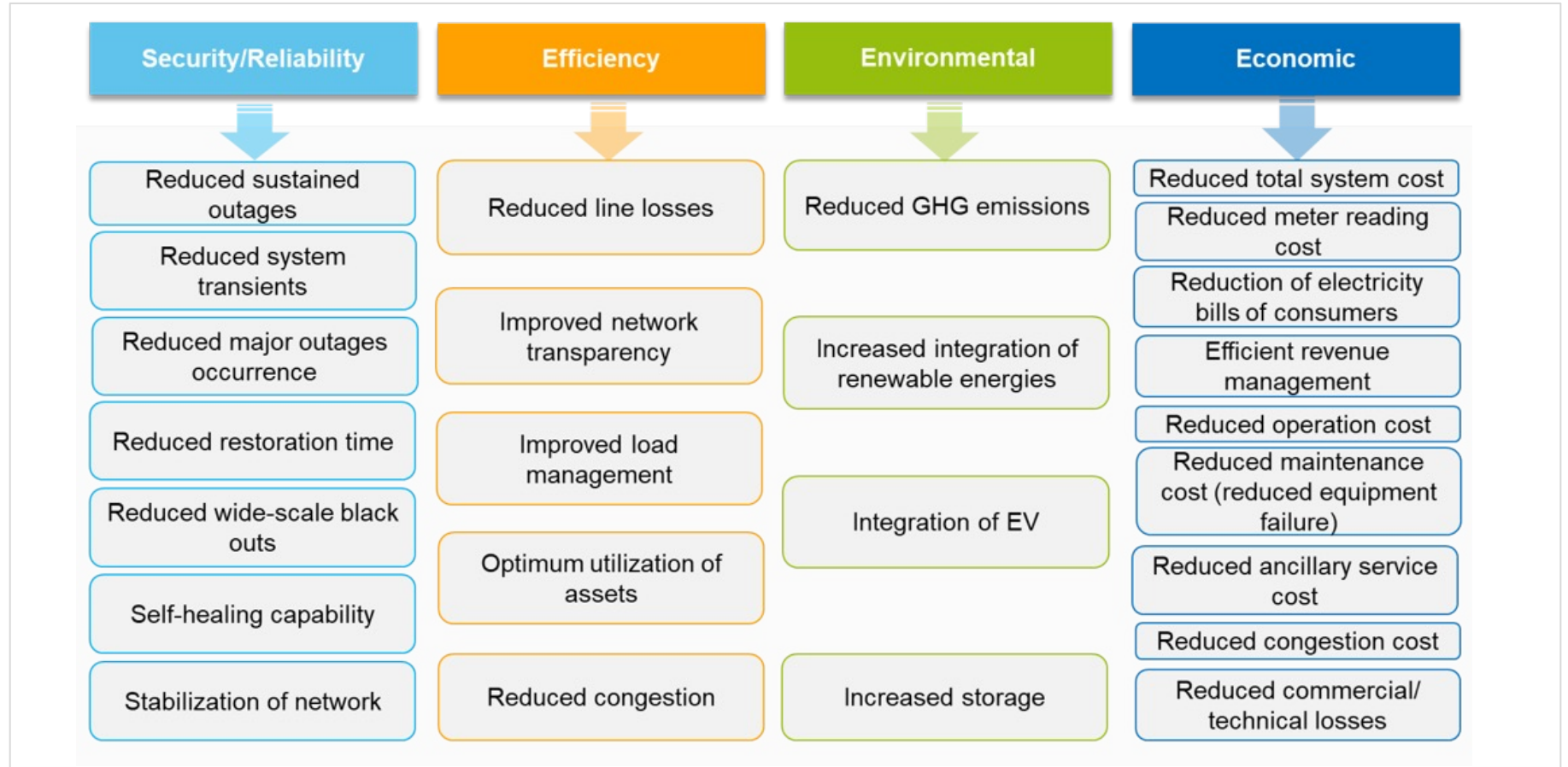
Average electricity losses in selected power systems



Electricity demand served by back – up generators & share of hours electricity lost to outages



# What benefits can digitalisation unlock?



# Challenges and what can be done

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## Data challenges

- ✓ Data-sharing platforms
- ✓ Harmonisation standards
- ✓ Data protection frameworks, transparent communication



## Insufficient co-ordination

- ✓ Develop communities of practice
- ✓ Create knowledge-sharing platforms
- ✓ Create cross-cutting networks
- ✓ Create special-purpose vehicles



## Lack of capacity

- ✓ Create initiatives to attract capacity and skills
- ✓ Develop opportunities for knowledge exchange
- ✓ Develop training and upskilling programmes



## Access to finance

- ✓ Stimulate public-private partnerships
- ✓ Support the creation of new instruments e.g. green bonds
- ✓ Redirect funding and develop dedicated financing vehicles
- ✓ Introduce training to develop bankable projects
- ✓ Support the creation of revenue-generating business models



## Digitalisation risks

- ✓ Develop cyber security frameworks and guidelines
- ✓ Create options for circularity
- ✓ Build capacity and create inclusive policies and projects

