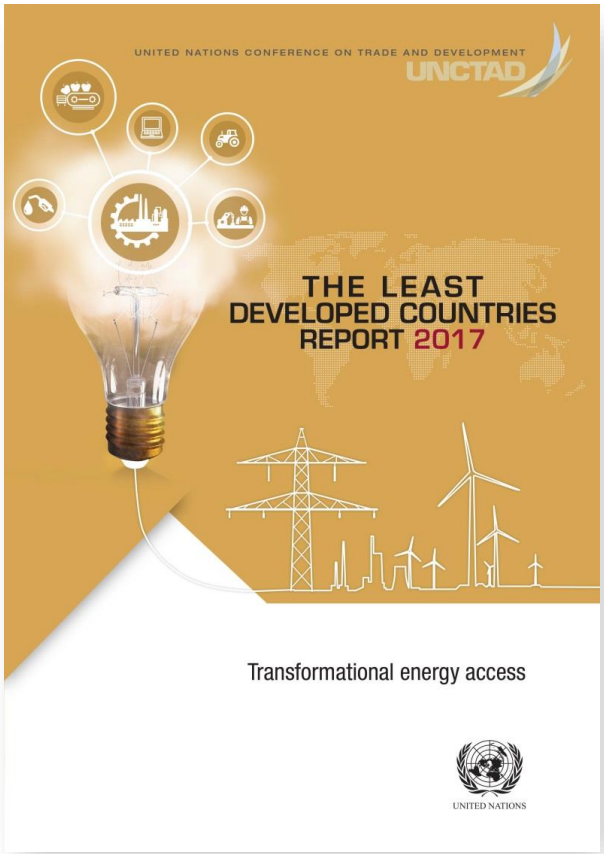


Media Briefing on Launching of the

UNCTAD's LDCs REPORT 2017

Transformational energy access

Presented by

Dr Fahmida Khatun

Executive Director, CPD

Dhaka: 22 November 2017

Organised by

CENTRE FOR POLICY DIALOGUE

Contents

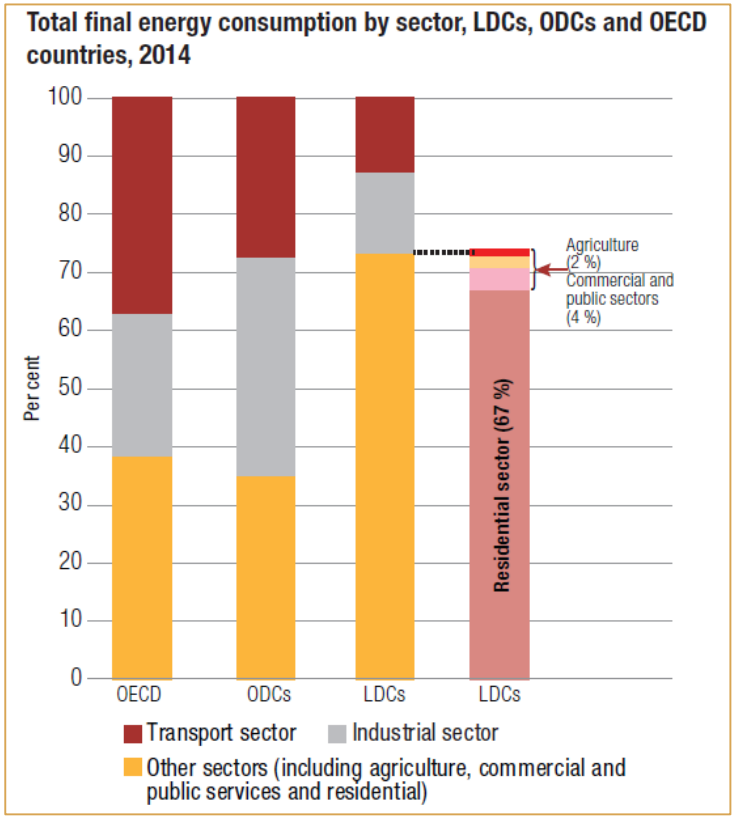
1. Context

- Previous editions of *The Least Developed Countries Report* have argued that the least developed countries (LDCs) are the battleground on which the SDGs will be won or lost, and SDG 7 is no exception.
- SDG 7: *to ensure access to affordable, reliable, sustainable and modern energy for all.*
- The LDCs have made extraordinary progress in increasing access to electricity, which has more than tripled from 12 per cent to 38 per cent since 1990.
- But this leaves 62 per cent of their people without access.
- Achieving universal access to modern energy globally is therefore critically dependent on achieving it in LDCs.
- But for most of them, doing so by 2030 — the target year for achieving the SDGs — will be an enormous challenge.
- Hence, the LDCs Report 2017 addresses the energy-development nexus.

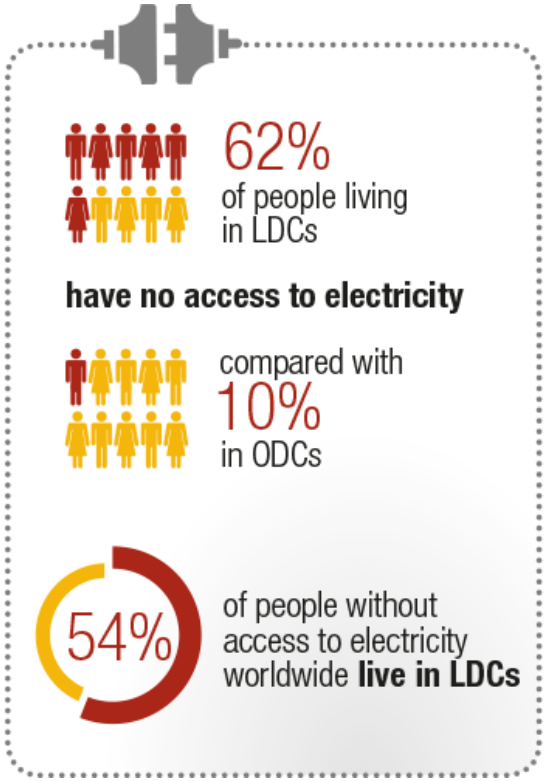
1. Context

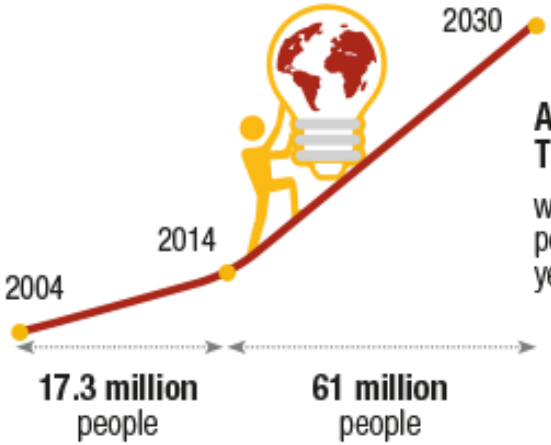
Graduation-Energy Access Nexus

- Energy is one of the critical factors hindering growth and poverty eradication in LDCs.
- These constraints impedes the graduation prospects of LDCs
- As well as its enabling role in relation to other sectors, energy contributes to a country's economy and structural transformation directly, *by generating value added, jobs and foreign trade, and through its capacity to generate and adopt technological innovations and thereby raise productivity.*
- Hence, in order to graduate, LDCs need to give due attention to universalizing access to energy in order to reap the benefits of economic growth.



1. Context





ACHIEVING UNIVERSAL ACCESS TO ELECTRICITY BY 2030

will require 3.5 times as many people in LDCs gaining access each year as in the last decade

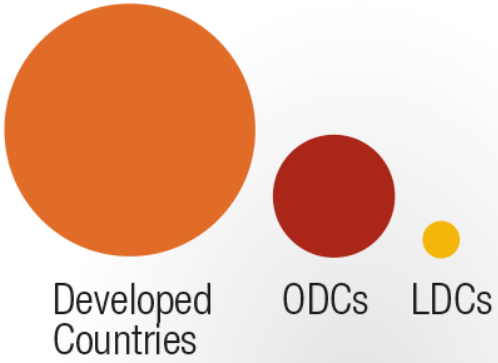
82% *of people in rural areas in LDCs have no access to electricity*

1. Context

Electricity generation capacity per person in LDCs is

1/12 of that **in other developing countries** (ODCs) and

1/50 of that in **developed countries**

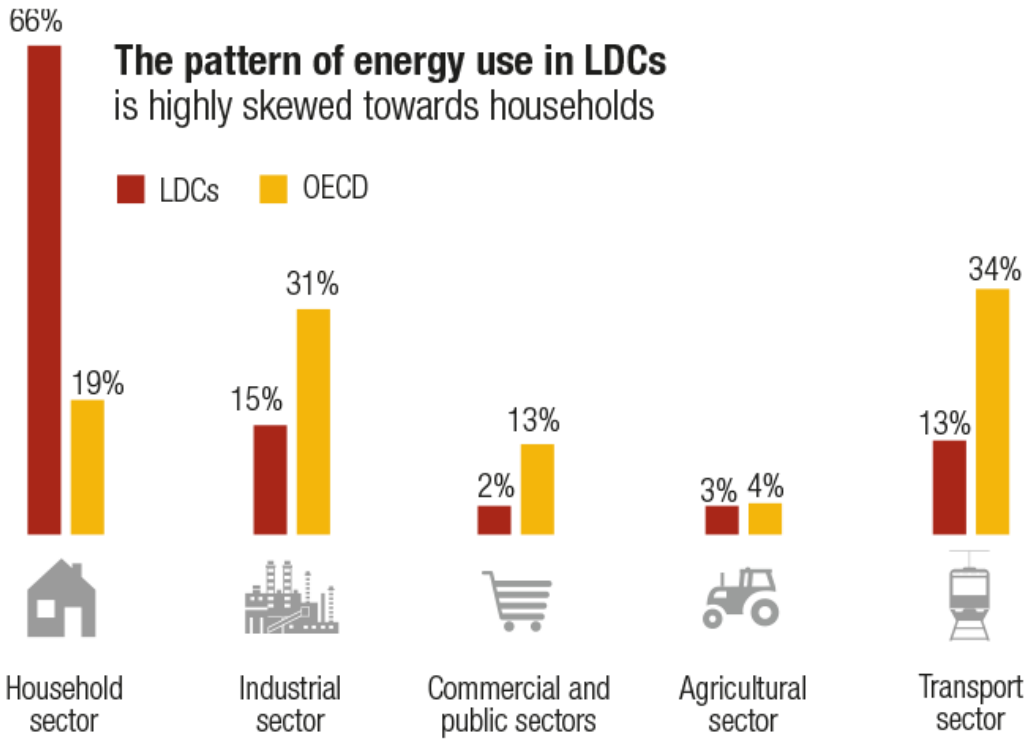


42% of LDC firms identify electricity as **a major constraint**

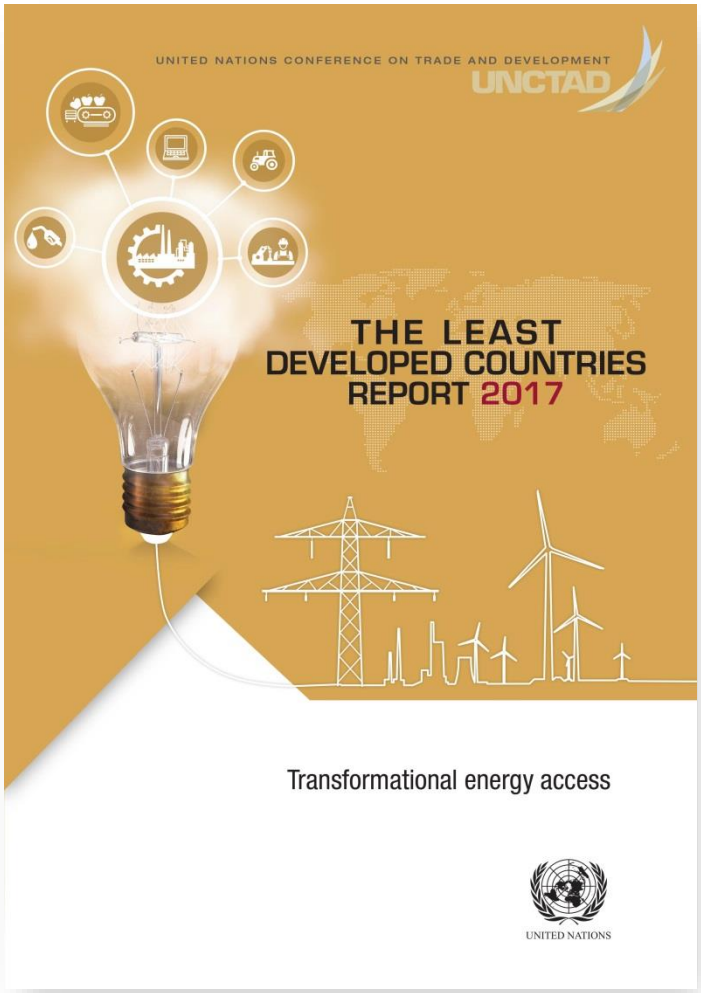
3/4 experience an average of **10 outages per month, lasting 5 hours each**

7% revenue **lost due to outages**

1. Context

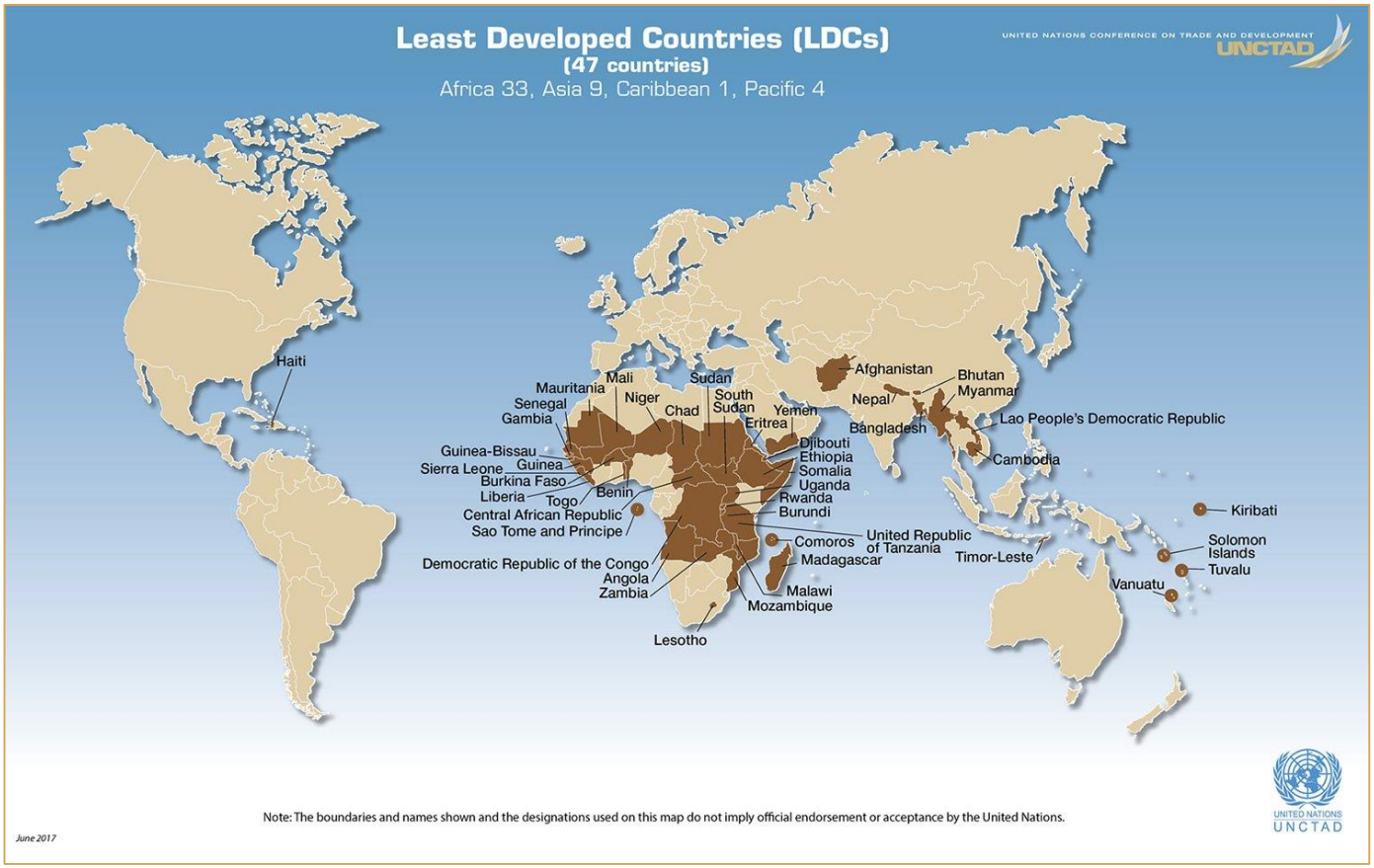

The pattern of energy use in LDCs
is highly skewed towards households
LDCs
OECD
66%
19%
15%
31%
2%
13%
3%
4%
13%
34%
Household sector
Industrial sector
Commercial and public sectors
Agricultural sector
Transport sector

2. INFORMATION ON LDCS



2. Information on LDCs

- 47 countries are currently designated by the United Nations as "least developed countries" (LDCs).



Current Composition

- 25 LDCs in 1971
- 48 LDCs in 2016
- **47 LDCs in 2017**

  33 African

  9 Asian

  4 Pacific

  1 Caribbean

2. Information on LDCs

Which are the least developed countries?

- The following three criteria were used by the CDP in the latest review of the list, in March 2015 to identify LDCs:
  - **Per Capita Income**
  - **Human Assets** (indicators of nutrition, health, school enrolment and literacy)
  - **Economic Vulnerability** (natural and trade-related shocks, physical and economic exposure to shocks, and smallness and remoteness)
- The list of LDCs is reviewed every three years by the Committee for Development Policy (CDP), a group of independent experts reporting to the United Nations Economic and Social Council (ECOSOC).
- The CDP, in its report to ECOSOC, may recommend countries for addition to, or graduation from, the list of LDCs.

2. Information on LDCs

Three Criteria

Income (in USD)

GNI per capita (GNI) (based on Atlas Method)

GNI is calculated from national accounts data converted into USD using the World Bank Atlas method

Human Assets Index (HAI)

(original indicator values converted into indices ranging from 0 to 100)

- Percentage of undernourished population
- Under-five child mortality rate
- Maternal mortality rate
- Gross secondary enrolment ratio
- Adult literacy rate

Economic Vulnerability Index (EVI)

(original indicator values converted into indices ranging from 0 to 100)

- Natural shocks (index of instability of agricultural production; share of victims of natural disasters)
- Trade-related shocks (index of instability of exports of goods and services
- Physical exposure to shocks (share of population living in low-lying areas)
- Economic exposure to shocks (share of agriculture, forestry and fisheries in gross domestic product (GDP); index of merchandise export concentration);
- Smallness (population in logarithm)
- Remoteness (index of remoteness).

2. Information on LDCs

Graduation Procedures

- **A country will qualify to be added to the list if it**
  - **meets the thresholds for addition under all three criteria**
  - **does not have a population greater than 75 million**

Inclusion Thresholds: 2015 Triennial Review

- **Gross National Income (GNI) per capita is *$1,035 or above***
- **Human Assets Index (HAI) score is *60 or below***
- **Economic Vulnerability Index (EVI) score is *36 or above***

Two Criteria for Graduation

- If graduation thresholds under at least 2 of the 3 criteria in at least two consecutive triennial reviews of the list are met.
- However, three-year average per capita GNI ≥ twice income graduation threshold (also known as "income-only" graduation rule)
  - ✓ Not mechanical: impact assessment, vulnerability profile, country views taken into account
  - ✓ Country needs to be eligible in two consecutive reviews before any recommendation is made
  - ✓ Graduation becomes effective after a transition period (normally three years), which allows country to prepare for graduation
  - ✓ After graduation, development partners are not to withdraw LDC support abruptly
- However, this will effectively lead to LDC status only if the Government of the relevant country accepts this status

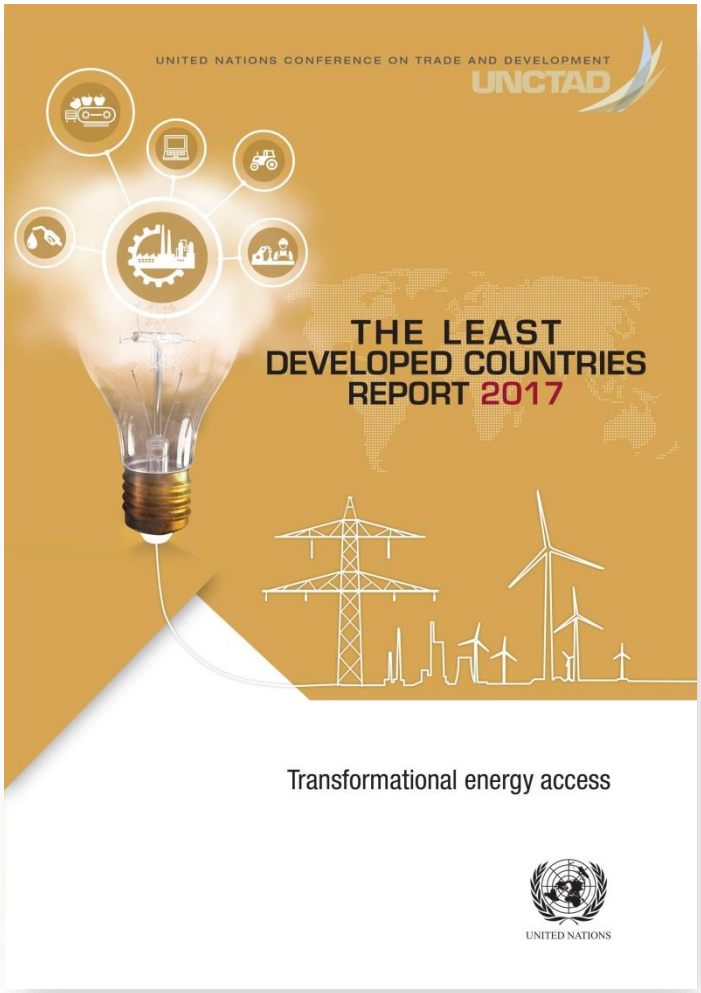
Overview of LDC Graduation

- Only 5 countries have so far graduated
  - Botswana in December 1994
  - Cape Verde in December 2007
  - Maldives in January 2011
  - Samoa in January 2014
  - Equatorial Guinea in June 2017

Overview of LDC Graduation

- In a resolution adopted in December 2015, the General Assembly endorsed the CDP recommendation of 2012 to graduate Vanuatu. In doing so, the Assembly took into consideration the setback that Vanuatu had suffered as a result of Tropical Cyclone Pam in March 2015.
- The General Assembly decided, on an exceptional basis, to delay the country's graduation to December 2020.
- The Committee's 2015 recommendation to graduate Angola was endorsed by the General Assembly in February 2016 through a resolution that set February 2021 as the country's graduation date.
- This decision was an exceptional measure to take into account the high vulnerability of the commodity-dependent Angolan economy to price fluctuations.
- In a June 2015 resolution, ECOSOC recalled the CDP's 2012 recommendation to graduate Tuvalu from LDC status, and deferred to 2018 the Council's consideration of this potential graduation case.

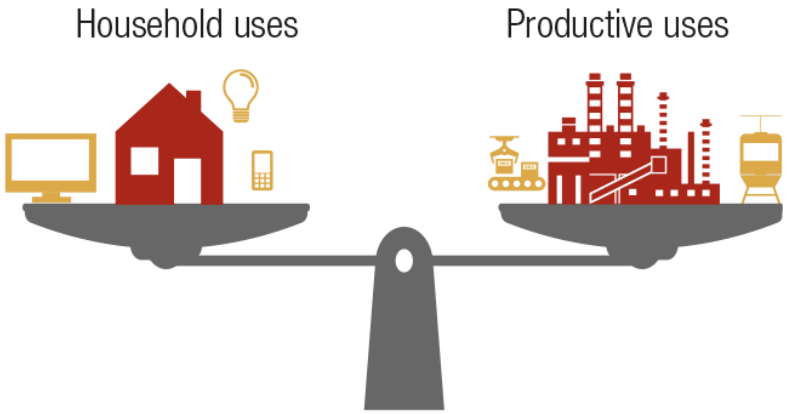
3. MAIN MESSAGES



3. Main Messages

(1)To achieve universal access to energy, LDCs must go beyond meeting basic domestic needs and target productive uses

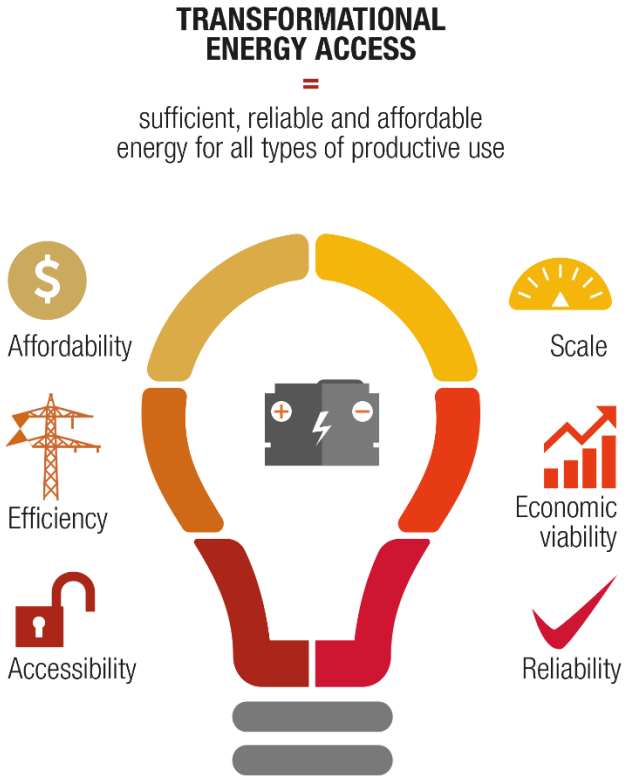
- SDG 7: Central to the realization of many other SDGs
- ***Access to modern energy*** is critical to all 3 main pillars of sustainable development- *economic, social, environmental.*
- But in LDCs, the ***economic*** benefits of modern energy have been neglected
- ***Productive*** use of modern energy is just as important as ***household*** use.



3. Main Messages

(2) Transformational Energy Access requires quality energy services

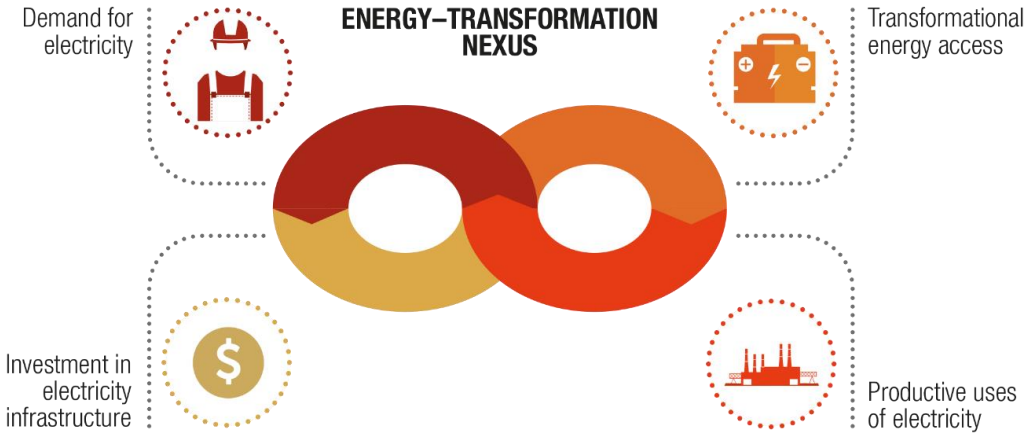
- Energy access alone is not enough in LDCs
- What is needed is Transformational Energy Access
- That is meeting the needs of producers for energy services that meet the criteria of…
- …scale, affordability, economic viability, efficiency, reliability, and accessibility



3. Main Messages

(3) The energy-transformation nexus is central to development and to SDG7 in LDCs

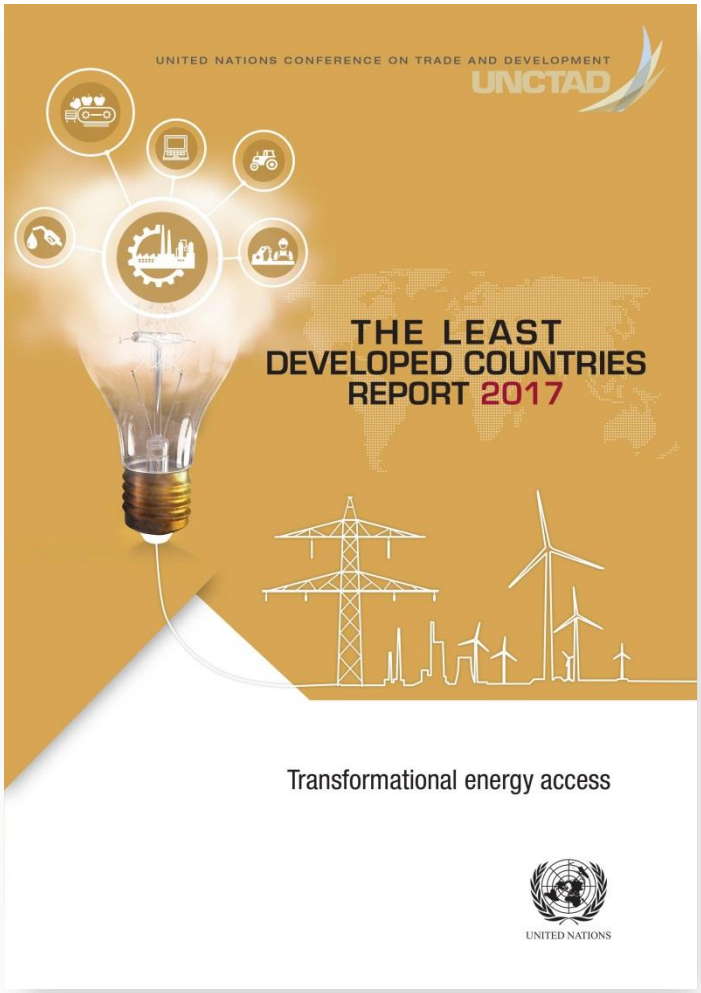
- There is an important two-way relationship between access to energy and structural transformation…
- …through productive use that can make investments in electricity generation and distribution economically viable



(4) Transformational energy access is important for rural development in LDCs

- **Rural development** is critical to poverty eradication in LDCs
- Energy access is central to rural development in LDCs
- Key obstacles to electrification in LDCs: Limited urbanization and sparsely rural populated areas…
- …but technological progress in renewables brings new opportunities.

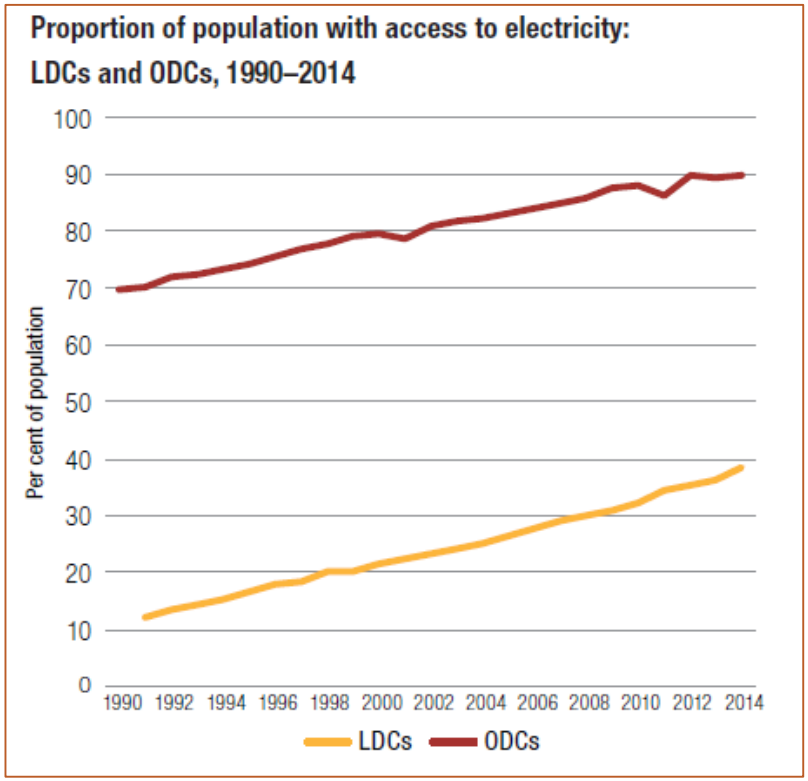
4. ENERGY IN BANGLADESH

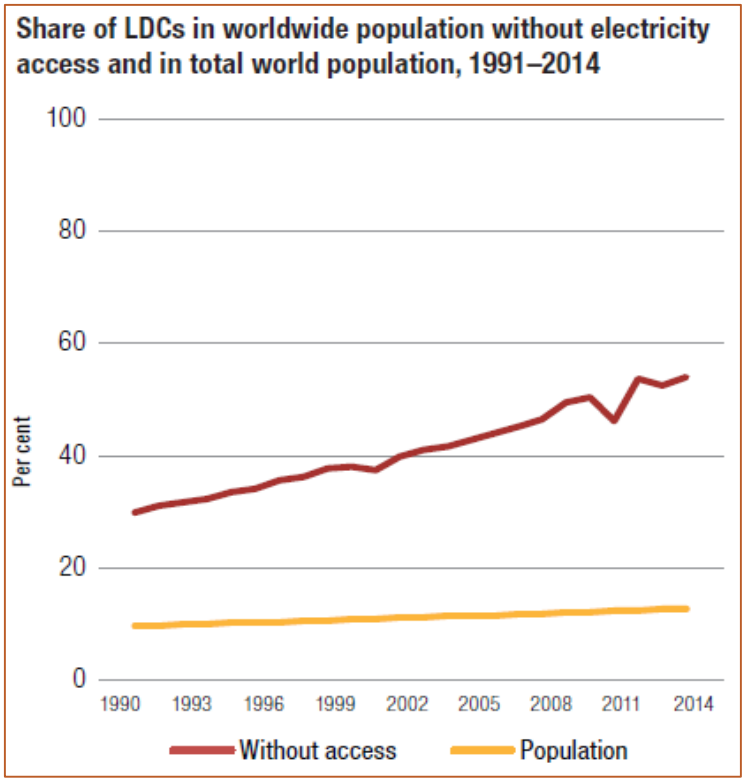


4. Energy in Bangladesh

Energy and access in LDCs

- Since 1990, LDCs have increased overall energy access, but the low starting point coupled with rapid population growth resulted in the energy access gap for the people.





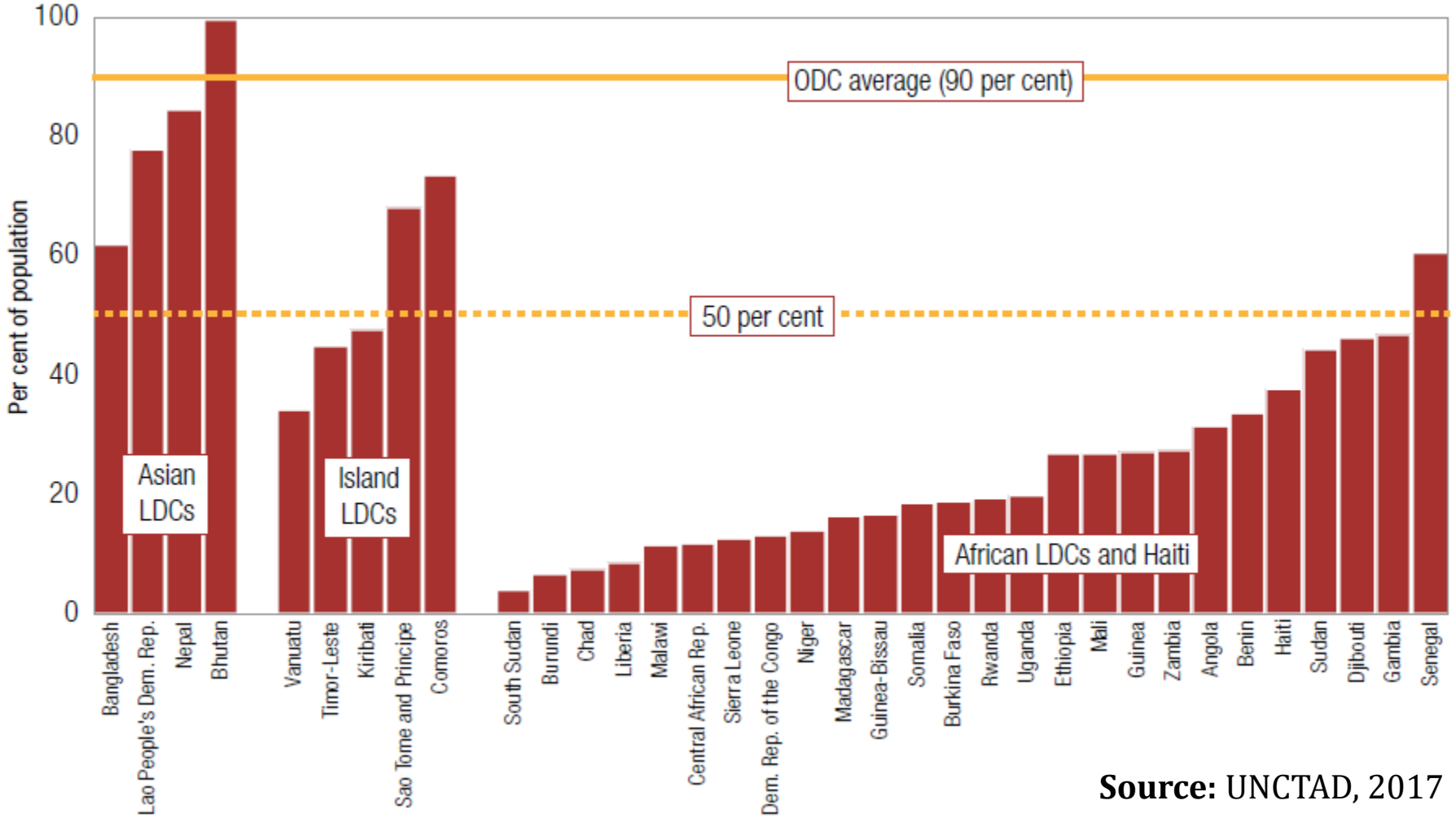
Source: UNCTAD, 2017

4. Energy in Bangladesh

- Among the LDCs with reliable data, two Asian countries — Nepal and Bhutan — appear well on track towards this target, which requires substantially fewer new connections per year than over the last decade for which data are available.
- Lao People's Democratic Republic could also achieve universal access by 2030 with around 10 per cent fewer new connections per year than over the last decade.
- The challenge will be substantially greater in Bangladesh and the Comoros, which require some 20-30 per cent more new connections per year, and still more so in Senegal and Sao Tome and Principe, where the increase required is around 75 per cent.
- ***In Bangladesh, in 2014, access to electricity was nearly 60 per cent, which is the lowest among all the Asian LDCs.***

4. Energy in Bangladesh

Figure: Access to Electricity in LDCs, 2014



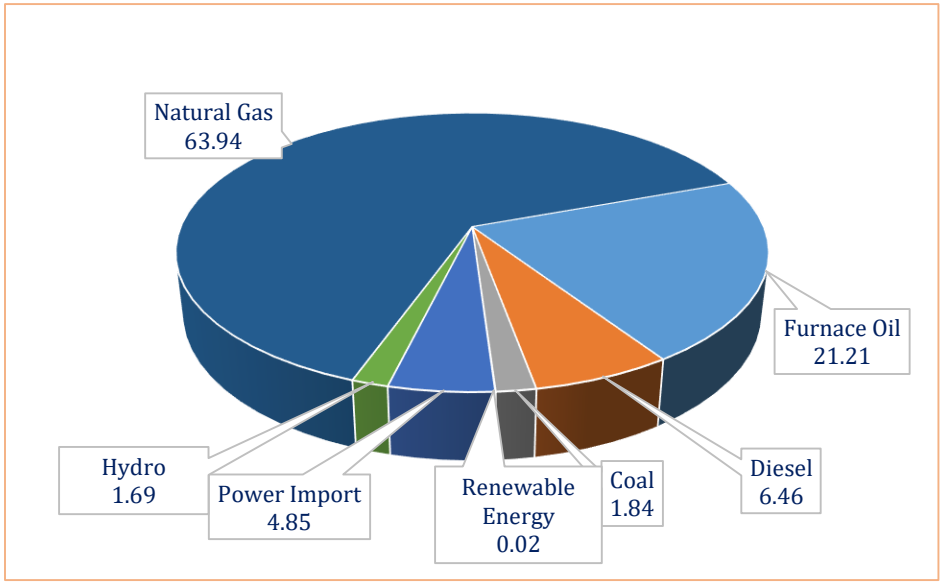
Source: UNCTAD, 2017

4. Energy in Bangladesh

Some recent data on the energy sector of Bangladesh reveal the following facts

- Total installed capacity in Bangladesh as of September 2017 is 13,621 MW.
- Two-thirds of the electricity production is dependent upon Natural Gas.
- Renewables shar

Installed capacity by fuel type (as on Sept 2017)



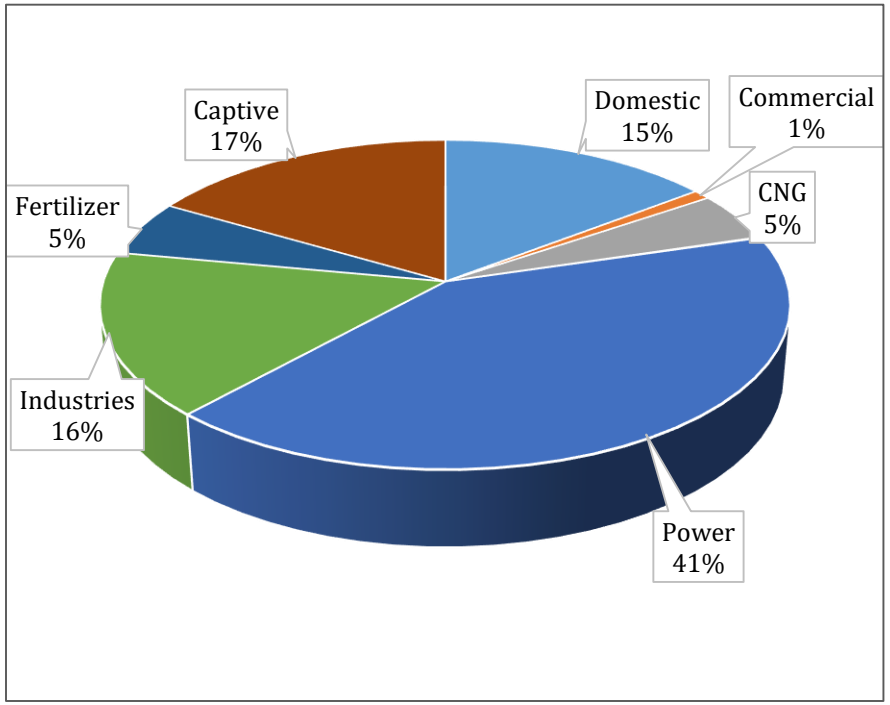
Source: BPDB, 2017

4. Energy in Bangladesh

Sector-wise gas consumption in Bangladesh

- Most of the g (41%) is consumed by the power sector of Bangladesh.
- Industries are responsible for 16% of the gas consumption

Sector-wise Gas Consumption (2015-16)



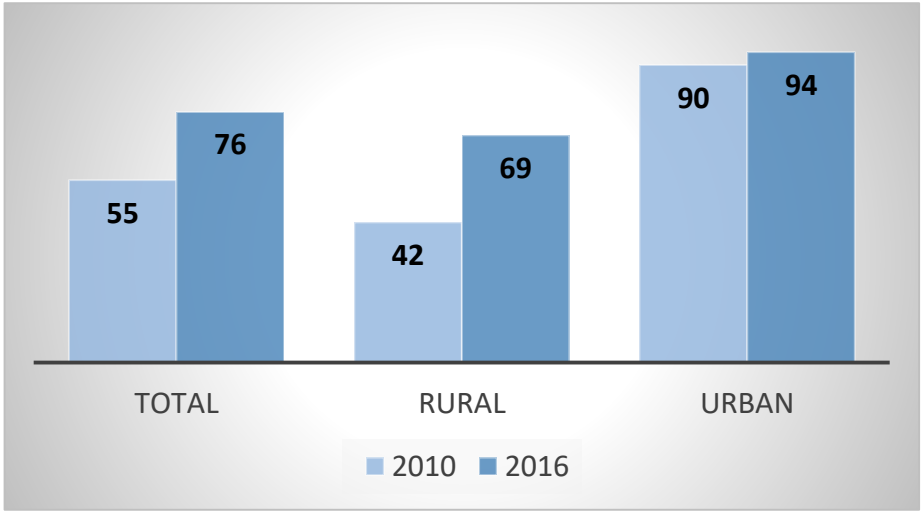
Source: Petrobangla Annual Report, 2016

4. Energy in Bangladesh

Household access to electricity in Bangladesh

- Access to electricity in Bangladesh has improved since 2010.
- However, there still remains a huge rural-urban divide in the country.

Access to electricity to households in Bangladesh (in percentage)



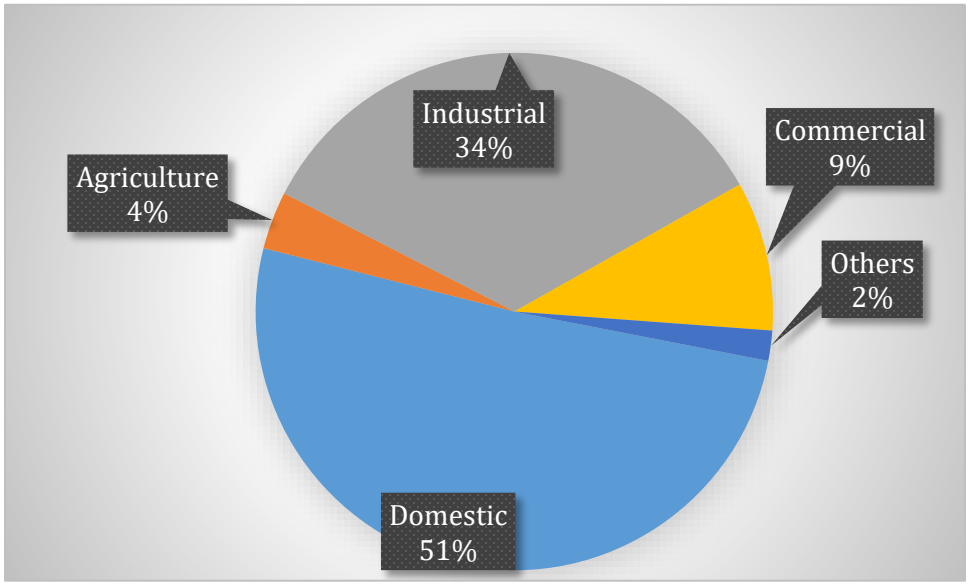
Source: HIES, 2016

4. Energy in Bangladesh

Power consumption pattern in Bangladesh

- The domestic sector consumes half of the power in Bangladesh.
- Industrial sector consumes one-third of the power.

Power Consumption Pattern of the Country 2015-16



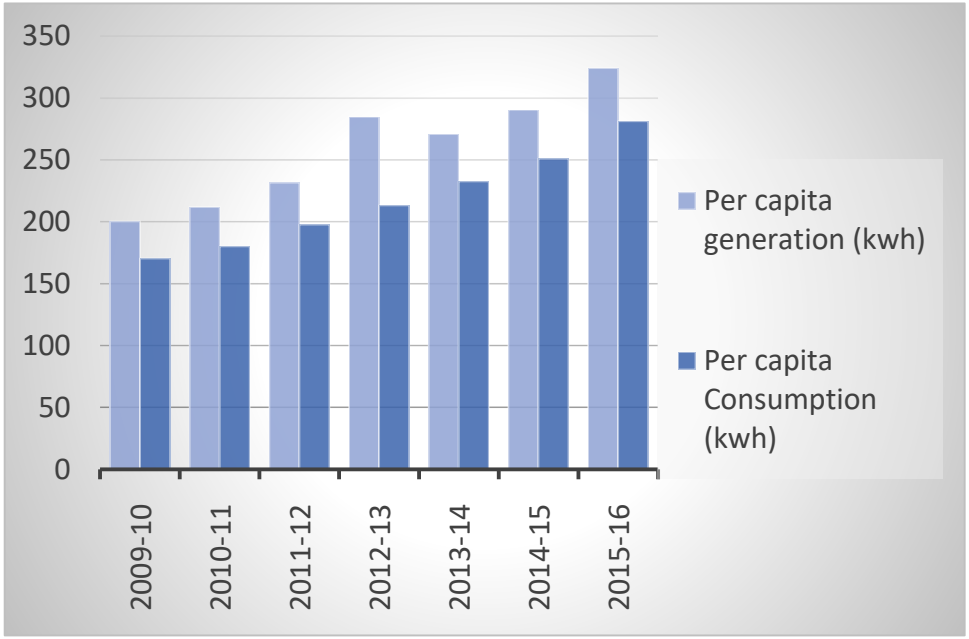
Source: BBS, 2016

4. Energy in Bangladesh

Generation and Consumption of Electricity

- As the figure shows, electricity generation has increased over the years.
- But electricity generation has yet to keep pace with consumption.

Per Capita Generation and Consumption (GRID)



Source: BBS, 2016

Scope for Renewables in Bangladesh

- Bangladesh has had some success in developing a domestic solar industry, which accounted for an estimated 140,000 jobs in 2016.
- While jobs in solar home systems are now plateauing, employment in mini-grid and solar pumping is increasing as the Government is devoting greater attention to these areas.
- The number of LDCs reporting solar capacity rose from 10 in 2000 to 40 in 2016, while their total solar generation increased from just 6 GWh to 446 GWh in 2014.
- Bangladesh leads the group in photovoltaic (PV) generation, accounting for nearly half of their total output, largely due to widespread use of solar home systems

Scope for Renewables in Bangladesh

- Rahimafrooz Renewable Energy, for example, manufactures rechargeable solar batteries, charge controllers and fluorescent lamps and has also developed a solar-powered irrigation system.
- Bangladesh's success can be ascribed in part to on-the-job training and vocational education programmes, promotion of domestic research, and strengthened coordination among firms, regulators and universities.

Gender aspects of energy and development: Bangladesh

- Electrification in **Bangladesh** has been found to increase the evening time women allocate to income-generating activities and their probability of employment (Kohlin et al., 2011).

- Research suggests that the expansion of the textile sector in Bangladesh, Cambodia, Lesotho and Madagascar provided opportunities for female employment (Fox, 2015).

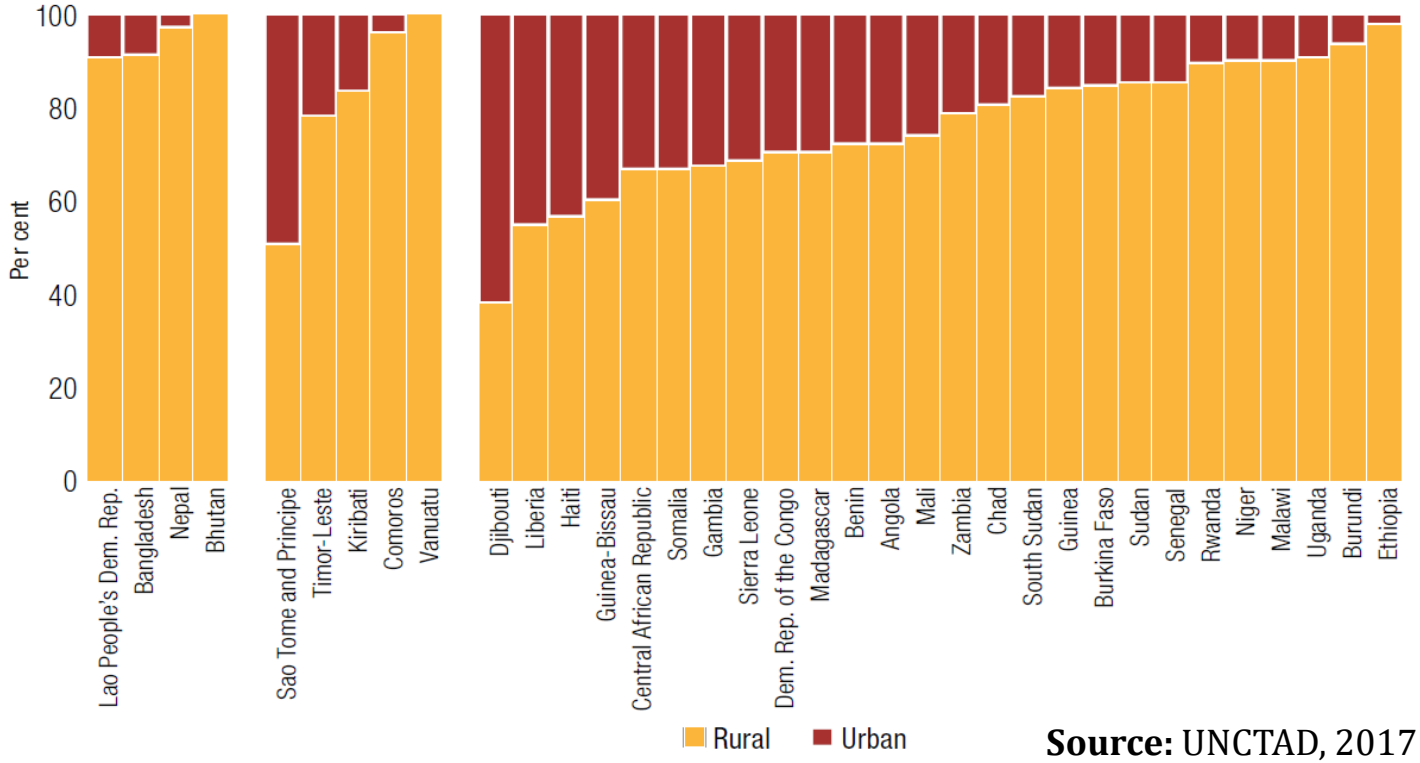
    - These industries also require access to reliable energy, but their gender impact is different, since they provide fewer female wage employment opportunities (Fox, 2015).

4. Energy in Bangladesh

The Rural-Urban Divide

- Most Asian and island LDCs are close to or above the 80-per-cent urban access threshold, so that further increases in overall access can be expected to narrow rural-urban gaps.

Figure: Proportion of people without access to electricity living in rural and urban areas, LDCs, 2014

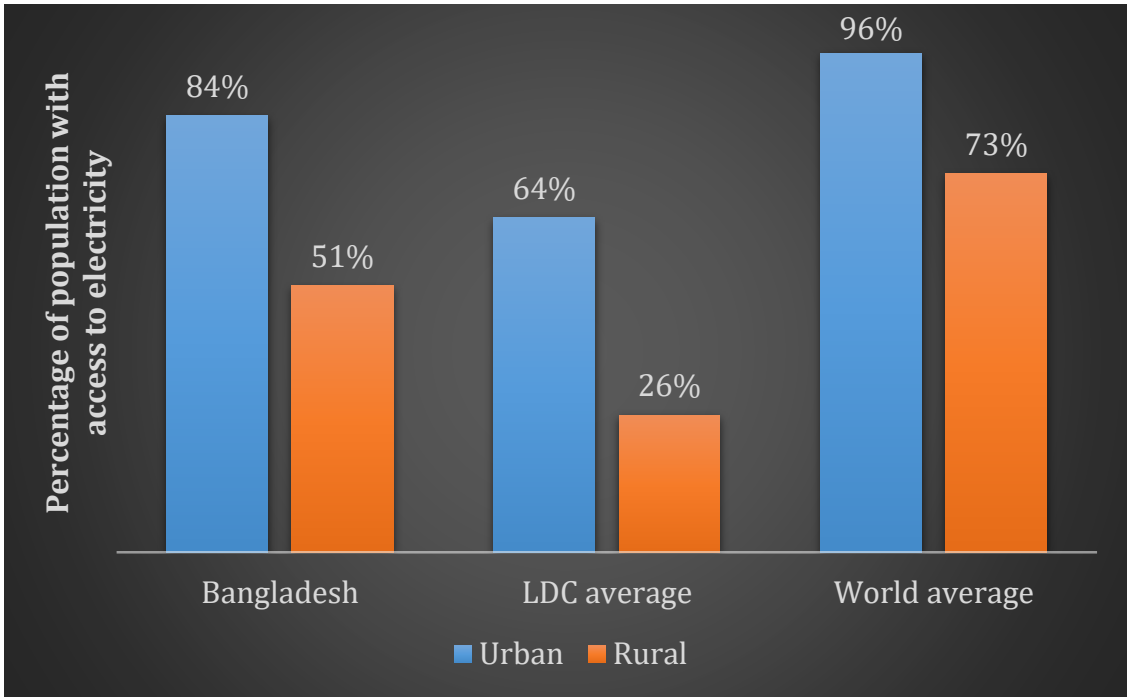


Source: UNCTAD, 2017

The Rural-Urban Divide

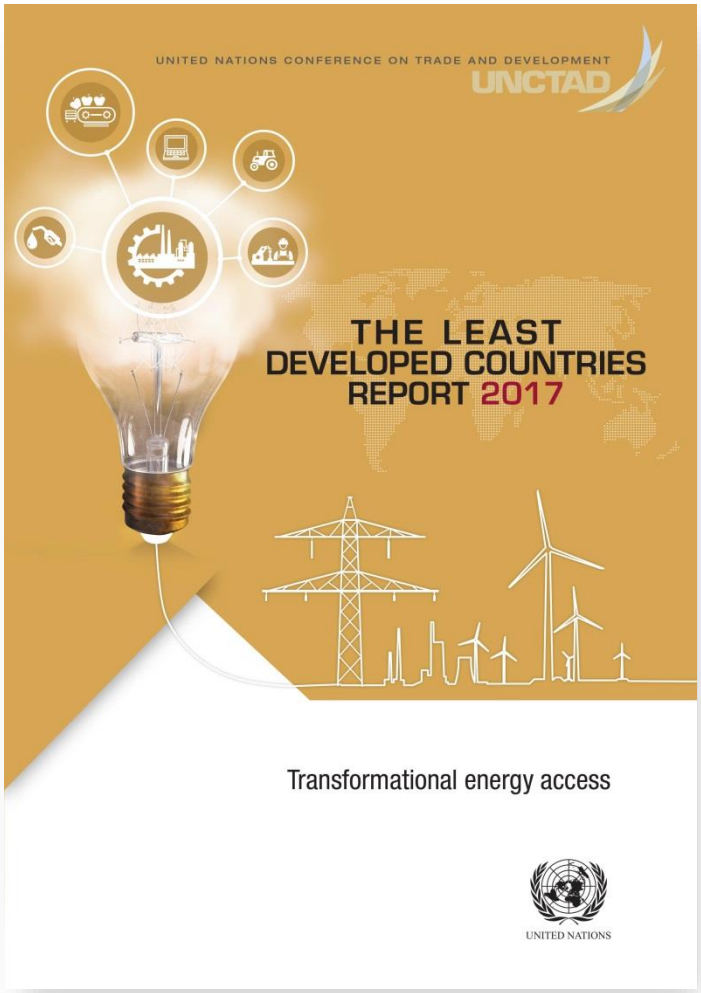
- The urban area in Bangladesh dominates in terms of Electrification Rate, but it is still low compared to world average.
- Only half of the rural population in Bangladesh has access to electricity

Figure: Electrification rate (2014)



Source: UNCTAD

5. KEY POLICY RECOMMENDATIONS



5. Key Policy Recommendations

A. Strengthen LDC electricity systems

B. Address electricity governance and finance

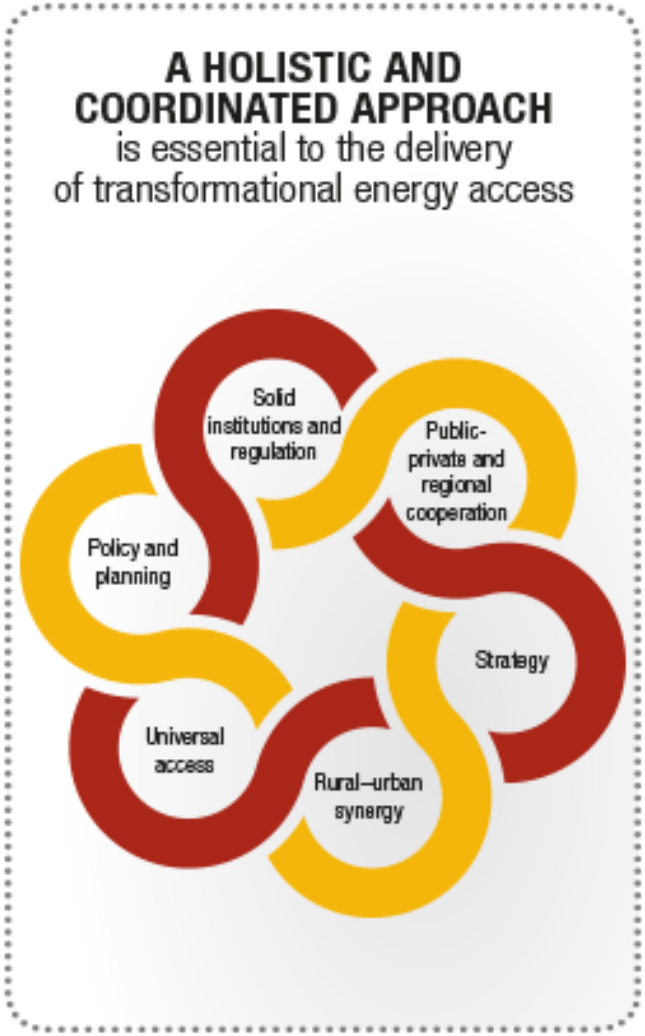
C. Integrate energy and development strategies

D. Harness international cooperation

5. Key Policy Recommendations

A. Strengthen LDC electricity systems

- Strengthening LDC energy systems requires a combination of long-term system-wide ***planning and coordination and flexibility***
- The effectiveness of system-wide energy planning hinges on ***policy consistency, realism and a sound information base***
- Capacities must be built for incorporating ***gendered approaches*** into energy programmes and projects



5. Key Policy Recommendations

A. Strengthen LDC electricity systems

- An ***evolutionary approach*** to power sector development is needed…
  - This could be attained through planned capacity additions, progressive expansion and upgrading of supply and power generation mix

- LDCs need to ***diversify their generation mixes***, selecting technologies according to local conditions and future needs

- A ***hybrid*** of grid (expansion and upgrading), off-grid, centralized and decentralized solutions could be harnessed

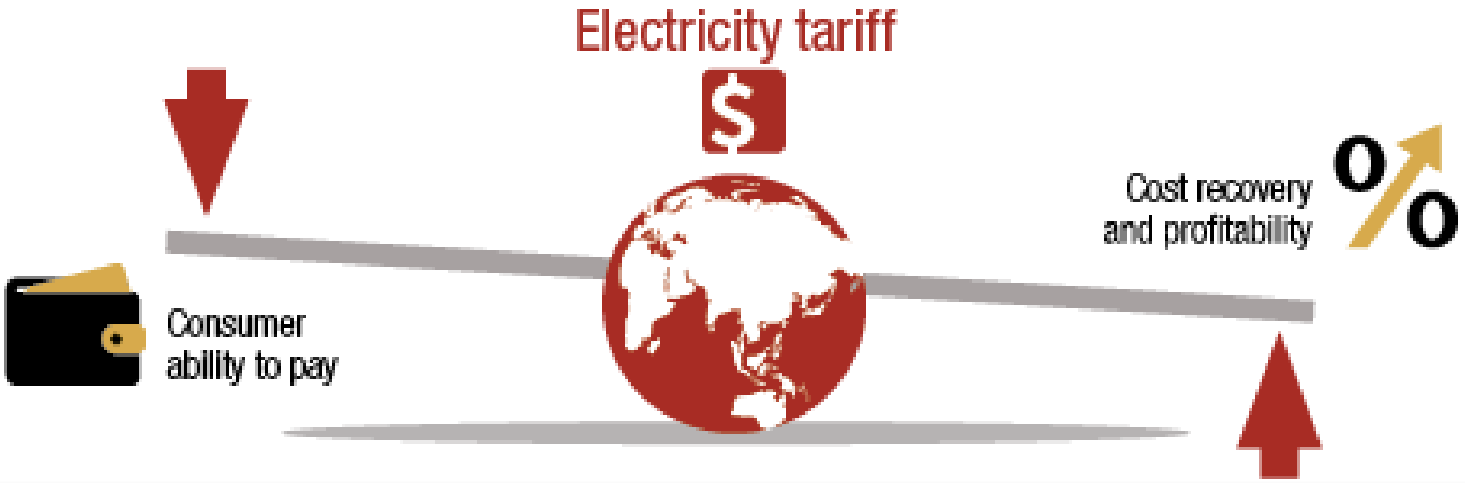
5. Key Policy Recommendations

B. Address electricity system governance and finance

LDC governance frameworks for transformational energy access must ensure:

- ❑ Robust regulatory and governance systems
- ❑ Clear vision of the roles of the public and private sectors
- ❑ Diverse and flexible mix of electricity sources and technologies
- ❑ Reasonable *affordability* for users, matched by…
- ❑ …*financial sustainability* of operators (e.g. through cost reflective tariffs)
- ❑ Adequate conditions to leverage public and private finance

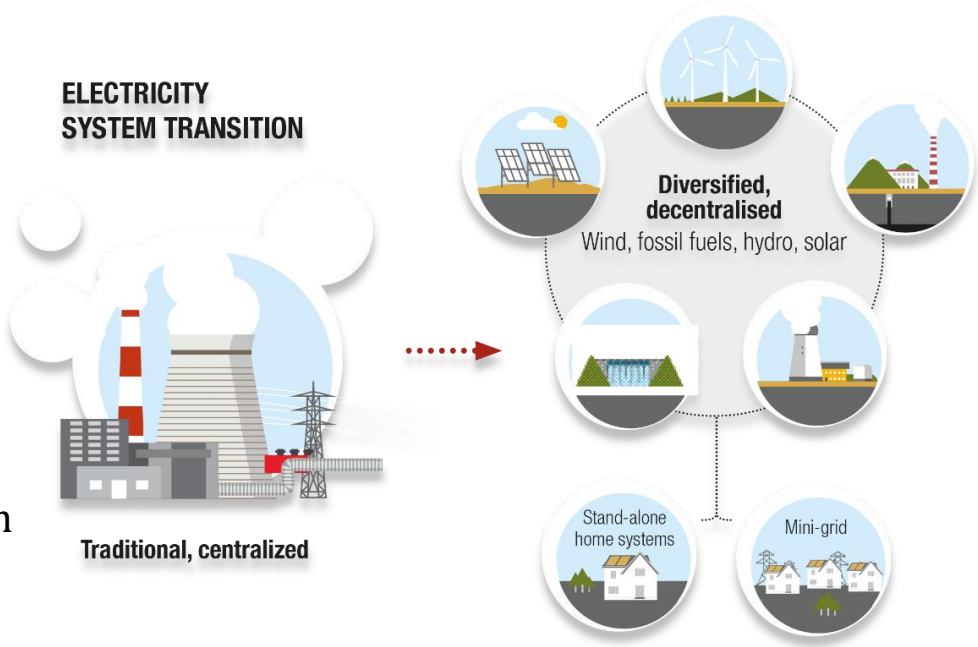
KEY CHALLENGE:
reconciling financial sustainability with affordability



5. Key Policy Recommendations

- Integrate energy policies and structural transformation strategies
- Opportunities from scalable renewable-energy technologies and mini-grids can be exploited to foster rural structural transformation…
- …matched by *complementary policies* (in agriculture, finance, training and human resource development)…
- …but pre-electrification technologies in rural areas are part of transition path
- Attention to building a domestic modern energy supply chain that develops linkages with other sectors…
- …and to *women empowerment policies* that allow women to contribute actively to structural transformation

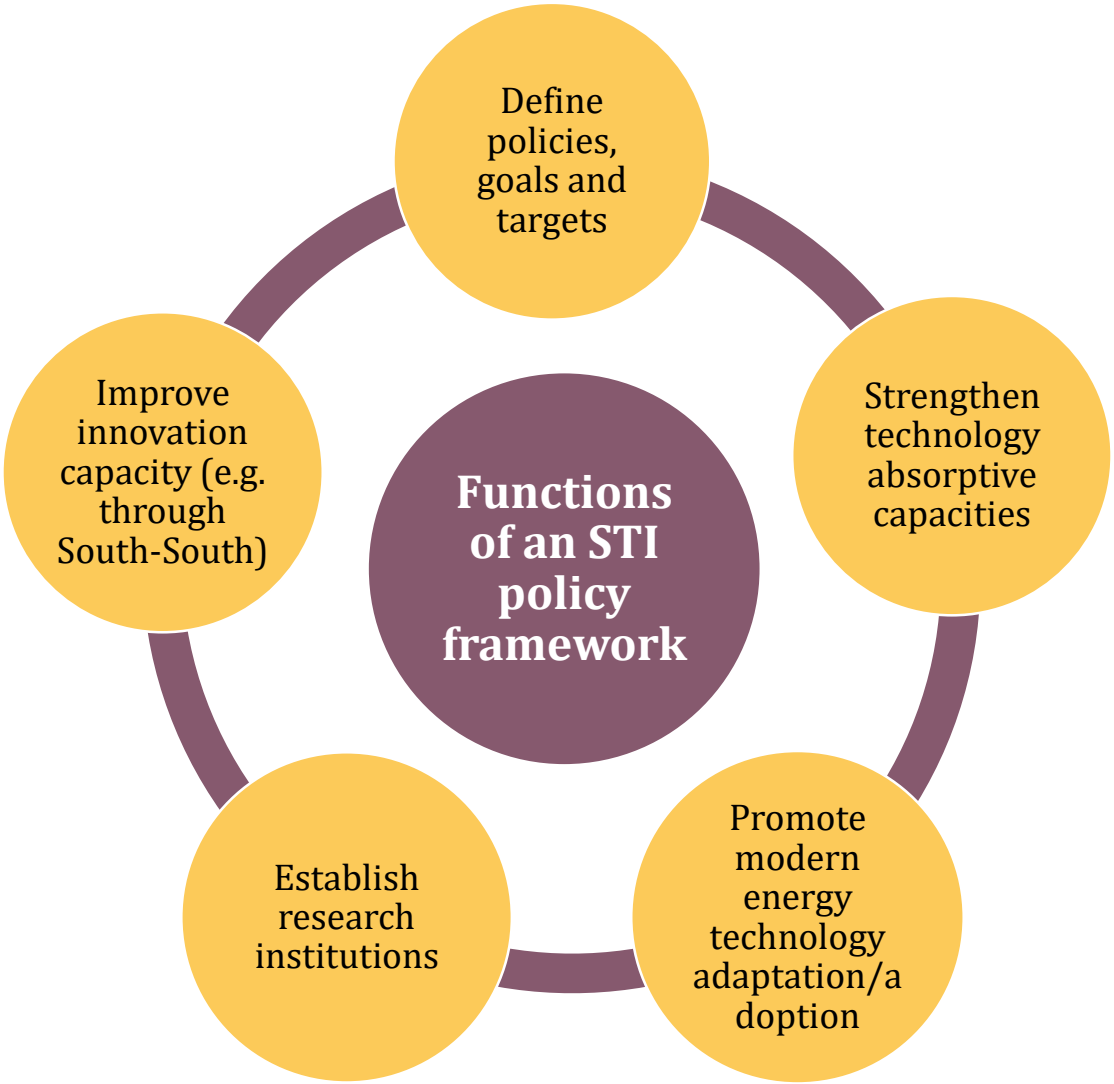
C. Integrate energy and development strategies



5. Key Policy Recommendations

C. Integrate energy and development strategies

- *Science, technology and innovation policies* are critical for transformational energy access
  - LDCs need an STI policy framework that pays adequate attention to modern energy technologies, especially renewable-based ones



5. Key Policy Recommendations

D. Harness international cooperation:

- LDCs need to enhance the impact of foreign direct investment
  - Low-carbon FDI can be mobilized…
  - … but foreign investors must not crowd out domestic actors in the energy sector

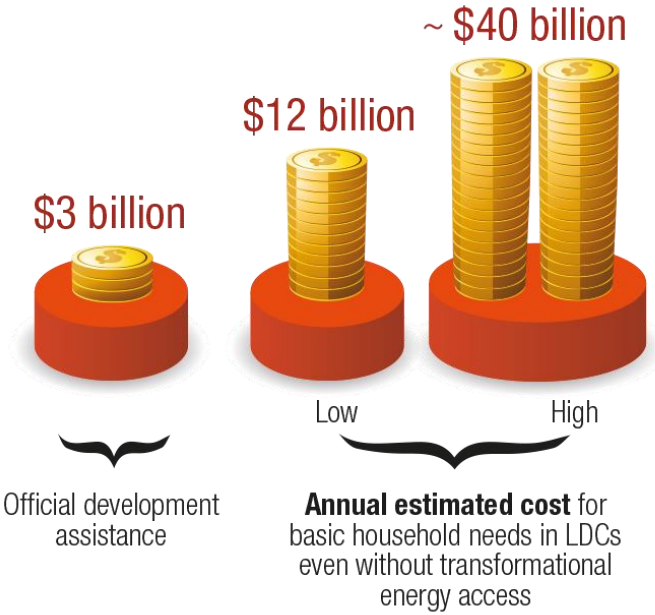
- Sovereign borrowing can be leveraged to finance energy infrastructure projects
  - …but beware of risks and of debt unsustainability especially when commodity prices are falling and international conditions are worsening

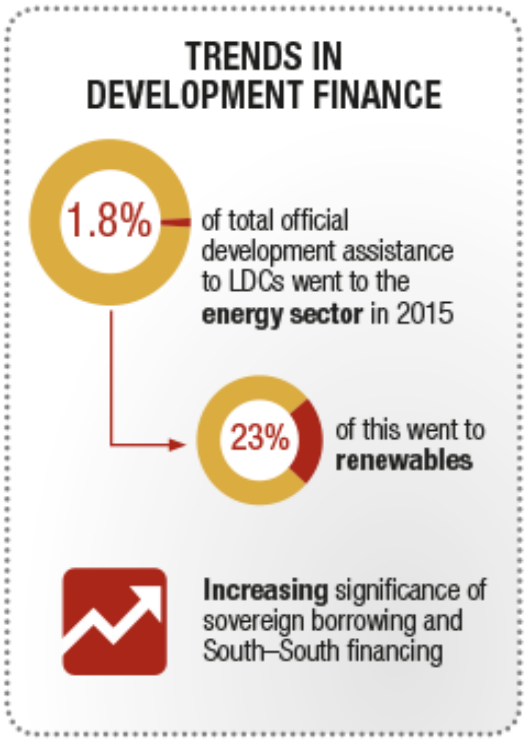
5. Key Policy Recommendations

D. Harness international cooperation

- Investments required to achieve universal access to electricity in all LDCs by 2030 are of the order of *$12 billion to $40 billion a year…*

- …but these are under-estimates as the figures do not include full costs for transformational energy access





- ODA must be scaled up, given LDCs limited domestic public finances and private sector reluctance to invest in energy sector in LDCs

- Greater scope in the renewables sector

- Increased South-South financing is helping

5. Key Policy Recommendations

D. Harness international cooperation

- Closer integration of regional energy markets can help:
  - Cross-border trade in electricity can boost energy export revenues, lower energy import bills and offer a means of energy storage
  - Regional power pools can play a role
- Increased technology transfer to LDCs is needed
- International support measures to LDCs for *technology transfer and absorption* must be beefed up
  - International innovation network for LDCs
  - Global and regional research funds
  - International energy-technology training platform
  - South-South and triangular cooperation
  - **Technology Bank for LDCs**

Thank you