

SECTOR ASSESSMENT (SUMMARY): FINANCE (INFRASTRUCTURE FINANCE AND INVESTMENT FUNDS)¹

Sector Roadmap

1. Sector Performance, Problems, and Opportunities

A. Energy Sector Overview

1. Demand for energy in Bangladesh has increasingly been growing as the country transforms itself from an agrarian economy to manufacturing and services-based economy. The national electrification rate rose from 35% in FY2003 to about 70% in FY2015. Power transmission and distribution losses dropped to 13.0% in FY2015 from 28.4% in FY2000.² The private sector participated in a near doubling of the country's generation capacity to 11,532 megawatts (MW) during FY2010–FY2015. Average gas production rose to 2,770 million standard cubic feet per day in FY2015, up from 1,744 million standard cubic feet per day in 2009. In the absence of the discovery of any major new gas fields, however, rising consumption means that current gas reserves are expected to be depleted by FY2023. The government is therefore working to arrange imports of liquefied natural gas (LNG) and signed an agreement in 2015 for construction of the Bangladesh's first LNG plant.

2. The electricity sector needs major investments to expand generation, transmission, distribution and strengthen the national power grid. The cost of meeting the generation target set in the country's Seventh Five-Year Plan (7th FYP) FY2016–FY2020 is estimated at \$21 billion (footnote 1). Of total investments that are required for electricity generation alone, 40% is expected to come from the private sector. However, ensuring that electricity, gas, and oil are appropriately priced is a major concern. The government has been subsidizing these prices at a level equivalent to 2% of gross domestic product (GDP). These subsidies could be phased out gradually if regulatory reforms were undertaken in the energy sector, particularly to set prices at adequate levels. The government aims to increase power generation by 12,584 megawatt (MW) during 2016 to 2020 and involve the private sector in 39% of this expansion, mainly through public–private partnerships (PPPs).

3. In the renewable energy (RE) sector, Bangladesh has implemented a successful off-grid solar program with over 3.6 million solar home systems (SHS) and about 150 MW of solar power capacity in operation, primarily spearheaded by the Infrastructure Development Company Limited (IDCOL). The total installed capacity of RE-based power generation is 173 MW as of FY2015 and the Government targets enhancing the capacity to 10% of total electricity generation by FY2020.

4. ADB has been a key development partner in the energy sector focusing on promoting investments in power generation, solar energy (through IDCOL), improving efficiencies, increasing gas production and transmission and improving the governance and regulatory framework. Investments in efficiency improvement, access to electricity and diversification of the energy mix through introduction of RE and LNG will be prioritized by ADB in the coming years with appropriate cofinancing where possible.

¹ Government of Bangladesh, Planning Commission. 2015. *Seventh Five Year Plan FY2016–FY2020: Accelerating Growth, Empowering Citizens*. Dhaka.

² The fiscal year of the Government of Bangladesh ends on 30 June. "FY" before a calendar year denotes the year in which the government's fiscal year ends, e.g. FY2015 ends on 30 June 2015. The fiscal year of the Infrastructure Development Company Limited ends on 31 December and is shown as the calendar year.

B. Transport Sector Overview

5. The transport system consists of roads, railways, inland waterways, two seaports, maritime shipping, and civil aviation.

6. **Roads.** The development of new roads during FY2010–FY2015 fell far below the government's targets. The country had a total road network in FY2015 of 289,334 kilometers (km). The network grew by only 692 km during FY2010–FY2015, compared with a target of 26,134 km. Performance on road improvement and rehabilitation was also below target, with work completed on 4,335 km, compared with the goal of 8,433 km. As of 2014, only 62% roads were in good or fair condition, well below the 95% target.

7. **Railways.** Government targets have not been met in the railway sector either. The railway network totaled only 2,877 km in FY2015, an increase of just 42 km from FY2010. Rail freight traffic dropped sharply during FY2010–FY2015 from 770,064 to 589,260 ton-kilometers. This is an important issue in part because improving the efficiency of the country's largest sea port at Chittagong hinges on expanding the ability of the railway, road, and river transport systems to move goods to and from the hinterland.

8. **Inland waterways and seaports.** The inland waterways subsector has done better, with dredging improvements carried out on 3,000 km of the network during FY2010–FY2015, almost meeting the government target of 3,120 km. One river container terminal was established, compared with the intended three, and 16 jetties were improved (target: 22). The container handling capacity of Chittagong Port, which handles 95% of country's seaborne trade, rose from 44.1 million tons in FY 2010 to 48.1 million tons in FY2015.

9. **Inadequate integration.** The transport modes have little integration, which puts heavy demand on the road transport system. The country needs to make the transport network more secure and dependable through greater modal integration. Most highways have only two lanes, and rail links are primarily single track. The institutional capacity to plan, operate, and maintain the road network and enforce road regulations needs strengthening. A government decision in 2014 to convert all the country's meter gauge rail lines to dual gauge will significantly expand the rail network's capacity and make it more efficient. Ongoing railway reforms need to be expedited to strengthen efficiency.

10. The government has estimated that an amount equivalent to 3.0% of annual GDP is required to finance transport infrastructure improvements during FY2016–FY2020. It expects an amount equivalent to 1.0% of GDP to be financed through PPPs, compared with only 0.2% of GDP under the sixth five year plan FY2011–FY2015. The Public Private Partnership Authority of Bangladesh has identified 15 PPP projects in road, rail, and port that will require an investment of \$10.4 billion.

11. ADB has been active in road, rail, port, and urban transport subsectors. It has introduced sector reforms which include the introduction of the first ever performance-based routine road maintenance system in Bangladesh. ADB interventions in the road sector will continue to emphasize improving the main transport corridors, particularly those facilitating sub-regional trade. ADB will also continue to support the Government's efforts to improve public transport in major urban centers by introducing energy efficient public urban mass transport. ADB's Office of Public Private Partnership is also working closely on the development of transport sector projects using the PPP modality.

C. Urban Infrastructure Sector Overview

12. The country's urban population grew rapidly from 20% of the overall population in 1991 to 28% in 2011 and is expected to reach 36% by 2025, or about 63 million people. This growth has widened an existing infrastructure and services deficit. Municipalities struggle to provide all their residents with basic services, including drinking water and sanitation, roads, and solid waste management and drainage systems. Although coverage of the main drinking water supply reached 86% in urban areas in 2012, only 32% of the urban population has access to a piped water supply in their households.

13. ADB has been a major development partner in efforts to improve urban water supply and sanitation systems and urban development overall in Bangladesh. It has provided substantial support to develop urban infrastructure, particularly for water supply, sanitation, and solid waste management. This in turn has helped improve the health of urban residents. ADB has helped city corporations and municipalities develop, rehabilitate, and improve water supply and other urban infrastructure and services and reform municipal governance. Because Bangladesh is highly vulnerable to the impacts of climate change, the designs of ADB's operations have increasingly incorporated climate risk assessments.

D. Education and Health Sector Overview

14. **Education.** Bangladesh has had notable achievements in education by providing nearly universal access to primary schooling and cutting dropout rates. It established gender parity in both primary and secondary education well ahead of the Millennium Development Goals' 2015 target date. The net primary school enrolment rate increased to 97.7% in 2014 from 94.8% in 2010, and the primary teacher–student ratio improved to 1:42 from 1:48 over the same period. However, the quality of the education being provided remains a major challenge. The system urgently needs to (i) improve the quality and availability of teachers; (ii) provide an adequate curriculum, learning materials, and facilities; and (iii) carry out more modern, systematic assessments of student learning outcomes.

15. ADB has played an important part in helping the country make the primary education system more efficient, inclusive, equitable, and child-friendly. It helped the government establish teacher standards to improve secondary education. Building on past experience, ADB is assisting the government in scaling up the skills of new workers and the existing workforce to raise their productivity and thereby increase their incomes and contribution to economic growth.

16. **Health.** There has been progress in improving health outcomes. Life expectancy at birth increased to 71.6 years in 2014 from 70.1 in 2010.³ The infant mortality rate dropped to 33.2 per 1,000 lives in 2013 from 38.9 in 2010. Nonetheless, the World Health Organization estimates that Bangladesh faces shortages of 60,000 doctors, 280,000 nurses, and 483,000 technologists. The country spends only \$27 per capita on health, compared with the \$54 per capita needed to have a fully functioning health system. Health care insurance is underdeveloped, and the health care provided to a consideration portion of the population by the private sector has been of questionable quality. The government is developing a strong regulatory structure meant to raise the quality of private sector health care services.

³ United Nations Development Programme. Human Development Reports. <http://hdr.undp.org/en/indicators/69206#> (accessed 16 November 2016).

E. Government's Sector Strategy

17. The 7th FYP aims to accelerate GDP growth progressively from 6.5% in FY2015 to 8.0% in FY2021 in an inclusive, pro-poor, and environmentally sustainable manner by enhancing domestic investments over the plan period and assumes that the private sector will provide the additional investments needed, with the public sector playing a catalytic role. The government is counting on the private sector to provide a lot of the long-term financing for major infrastructure investments. Although this is central to its infrastructure development plans, weaknesses in government agencies and institutional arrangements for developing PPPs could continue to be obstacles. The government established the PPP Authority, a PPP unit in the Ministry of Finance, and a PPP technical assistance fund, but its PPP initiatives have not gathered any momentum. This is due to weak capacity in the PPP authority, lack of the necessary PPP skills and know-how in government line ministries, weakness in the government's land policy and administration, and the absence of proper operationalization of financing vehicles. The government enacted a PPP law⁴ in 2015 to establish the legal framework for the development and financing of PPP interventions. XXXXX. It expects that the PPP investments will start to grow and help bridge the gap in infrastructure finance.

F. ADB Sector Experience and Assistance Program

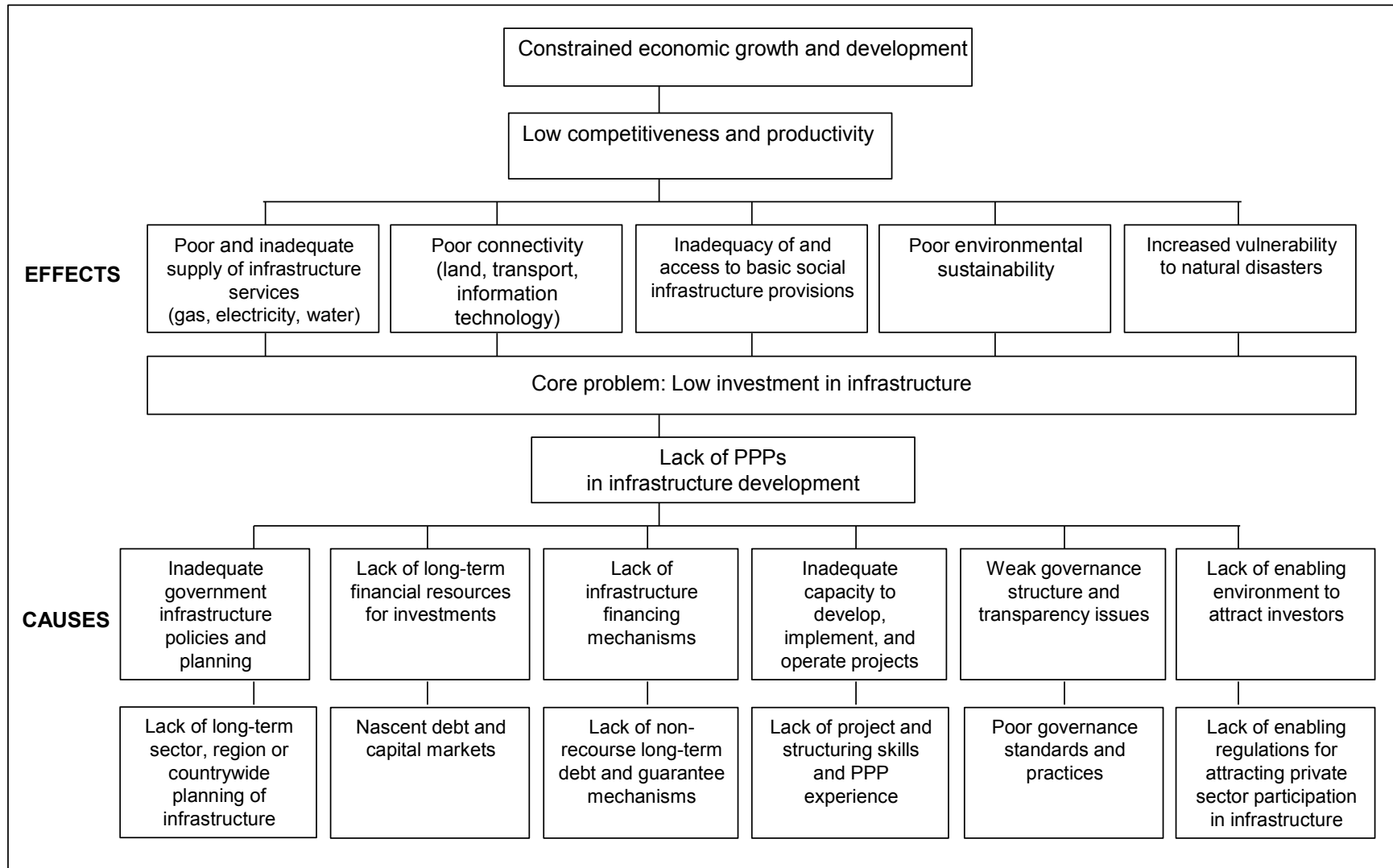
18. The draft country partnership strategy (CPS) 2016–2020 for Bangladesh focuses on easing the infrastructure constraints in areas such as transport, energy, and water and municipal services—and promoting greater private sector participation. This is in line with the Government's 7th FYP, which aims to achieve an average annual GDP growth of 7.4% by substantially boosting private sector investment and developing infrastructure. The CPS highlights that the development of industrial hubs in distant locations will require integrated infrastructure development. This includes addressing transport needs in a variety of forms, developing logistics facilities and services, and developing power and energy supplies. These efforts can be complemented by developing industrial zones and special economic zones. ADB will support these efforts along the nationally important highways, based on ADB's core strengths and depending on the needs.

19. Consistent with the priorities of the midterm review of ADB's Strategy 2020,⁵ ADB's support in Bangladesh will maintain a focus on infrastructure development, the scaling up of support for climate change adaptation, and assistance for climate change mitigation through clean energy and energy efficiency projects. While ADB's public sector operations will continue to play a role in improving access to finance, ADB's broader support for private sector development will include nonsovereign lending in infrastructure operations, including advisory support for PPP transactions. ADB will continue to cooperate closely with other major development partners in the development of the infrastructure sector in Bangladesh.

⁴ Government of the People's Republic of Bangladesh. Public Private Partnership Authority. http://www.pppo.gov.bd/download/ppp_office/PPP-Law-2015.pdf and http://www.pppo.gov.bd/events2015_enactment-of-the-bangladesh-public-private-partnership-ppp-act-2015.php (accessed 15 November 2016).

⁵ Asian Development Bank. 2014. *ADB's Strategy 2020 Mid-Term Review*.

Problem Tree for Infrastructure



PPP = public-private partnership.