

# America's Global Infrastructure Opportunity

## *Three Recommendations to the New U.S. Development Finance Corporation*

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### THE ISSUE

The launch of the U.S. Development Finance Corporation (USDFC) in October 2019 is an extraordinary opportunity to accelerate capital flows into emerging and frontier markets in support of U.S. national security, development, and commercial objectives. The new agency is inheriting a fundamentally solid foundation to build upon from the Overseas Private Investment Corporation (OPIC). However, it would represent a tremendous missed opportunity if the USDFC merely replicated OPIC's activities at a higher volume. This is especially the case for infrastructure finance, the sector where USDFC has the greatest potential to have impact. To help ensure success at scale, we recommend the USDFC:

1. Focus on fast-growing emerging market urban clusters by organizing investment opportunities around building Smart Cities.
2. Respond to unmet power needs by investing aggressively in both hard and soft energy infrastructure and technology.
3. Help close the digital divide with soft infrastructure investments.

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The Center for Strategic and International Studies (CSIS) and the Energy for Growth Hub, two independent organizations that have closely supported the creation of the USDFC, convened the *Working Group on U.S. Development Finance for Infrastructure* to consider the context and emerging opportunities and provide focused recommendations for the new USDFC to live up to its potential. The questions we asked included: What are the major global and market trends affecting the USDFC's ecosystem? Where are the potential opportunities the greatest? How can the USDFC do more, in volume and quality, than OPIC in filling the infrastructure gaps to unleash the potential of the private sector and to create jobs? This memo is a report of the co-chairs and does not necessarily represent the views of all participants in the Working Group. A full list of Working Group participants is listed in Annex 1.

## STRATEGIC FRAMING

**Enormous expectations for the USDFC.** The passage of the Better Utilization of Investments Leading to Development Act (BUILD Act) in 2018 will transform OPIC into USDFC, a larger, full-service development finance institution, in October 2019. The goals for the new agency are ambitious, including that it will:

- *Deliver on its triple mandate* to meet development outcomes, support U.S. foreign policy goals, and make investments that deliver positive financial returns for U.S. taxpayers.
- *Utilize its new capabilities*, such as greater financial capacity (up to \$60 billion from OPIC's current \$29 billion liability cap) and additional tools and flexibility (e.g., a grant window, equity authority) to rapidly increase deal flow and crowd in private capital.<sup>1</sup>
- *Respond to the changing global landscape of development finance*, including providing an alternative to assertive activities of actors like China and Russia in areas such as critical infrastructure, advanced energy systems, and cybersecurity.

### A tight link to national interests and U.S. strengths.

Development finance can be a potent tool to promote U.S. strategic interests around the world, which can build upon American business and economic models. The USDFC's implicit mission is also to find ways to:

1. Promote the U.S. business model and private sector-led capitalism;
2. Bolster U.S. investment, firms, and overall U.S. global competitiveness;
3. Buttress U.S. leadership in technology and innovation;
4. Encourage and enable partnerships with close allies like Japan, Korea, Germany, Canada, Australia, and others;
5. Provide viable alternatives to investment from Russia or China in regions of strategic importance and in critical sectors.

The urgency of the mission is driven by rapid changes in global markets, demographics, and technology. The USDFC will be operating in a global context of shifting markets and trends:

- *The world is increasingly urban.* The UN projects that by 2050 two-thirds of humanity will live in urban areas.<sup>2</sup> Moreover, the world will have no less than 50 megacities of at least 10 million people each.<sup>3</sup> Nearly all of these urban clusters (45 of 50 and 18 of the top 20) will be outside Europe and North America (see Table 1).

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- *Employment creation for young people is a top priority for every government and ally of the United States.* Meeting the needs, for example, of the 12 million young Africans who enter the job market each year is an acute necessity for economic, developmental, and security reasons. Given the shifts in global industries, many of these future workers will not be in traditional manufacturing but in the services sector.
- *Infrastructure, especially power, is a critical constraint to economic growth and job creation.* Data from the World Bank suggest that cost and reliability of power is a top barrier to firm expansion and productivity.<sup>4</sup> At the same time, energy use is extremely low in emerging and frontier markets. Per capita electricity consumption is 16 times greater in the Organization for Economic Co-operation and Development (OECD) countries than in sub-Saharan Africa (see Table 2).
- *Technology can help economies leapfrog geography and other barriers but only if the digital divide is narrowed.* Access to the internet improves citizens' quality of life and helps to promote economic growth by bringing information and services to underserved areas. While cell phone penetration has expanded impressively, an estimated 60 percent of the world's population is still offline.<sup>5</sup>

**Table 1: The World's Largest Cities in 2050 (population, millions)**

1.	Mumbai	42.4	11.	Cairo	24.0
2.	Delhi	36.2	12.	Manila	23.5
3.	Dhaka	35.2	13.	Sao Paulo	22.8
4.	Kinshasa	35.0	14.	Shanghai	21.3
5.	Kolkata	33.0	15.	Lahore	17.4
6.	Lagos	32.6	16.	Kabul	17.1
7.	Tokyo	32.6	17.	Los Angeles	16.4
8.	Karachi	31.7	18.	Chennai	16.3
9.	New York	24.8	19.	Khartoum	16.0
10.	Mexico City	24.3	20.	Dar es Salaam	16.0

Source: Daniel Hoornweg and Kevin Pope, Socioeconomic Pathways and Regional Distribution of the World's 101 Largest Cities (Toronto: Global Cities Institute, University of Toronto, January 2014), <https://shared.uoit.ca/shared/faculty-sites/sustainability-today/publications/population-predictions-of-the-101-largest-cities-in-the-21st-century.pdf>.

**Table 2: Power Consumption  
(Annual kWh, per capita)**

United States	12,984
China	3,927
India	805
Pakistan	471
Ghana	354
Nigeria	144
Haiti	39

Source: World Bank, “Electric Power Consumption (kWh per capita),” 2014, <https://data.worldbank.org/indicator/eg.use.elec.kh.pc>.

## RECOMMENDATIONS FOR THE USDFC

Given the context, expectations, and trends in the global economy, we advise the USDFC to take advantage of this opportunity by prioritizing (a) areas where U.S. firms have a competitive or technological advantage, (b) projects that can show reasonably positive momentum in a relatively short-time period, and (c) sectors where development finance is most needed and where prospects for social and economic impact are high. To meet all of these criteria, we advise the USDFC pursue the following recommendations.

### **Recommendation 1. Focus on fast-growing emerging market urban clusters by organizing investment opportunities around building Smart Cities.**

Rapidly growing urban centers can become sources for dynamism and entrepreneurship, or they can create a range of social, political, and economic risks. The difference in trajectories is largely driven by how well expansion is managed, such as the ability to address the needs of residents and businesses. Many cities in emerging and frontier markets (Lagos, Jakarta, Cairo, Dhaka, Kinshasa, Manila, Karachi, and many more) are struggling to find financing for critical infrastructure and services for its citizens. Smart Cities—cities that utilize advanced technology to enable efficient solutions for issues of urbanization—offer tremendous opportunities for the USDFC to:

- *Aggregate a wide range of services and products.* These include applying technology to help meet demands for transportation, housing, water and waste treatment systems, power, safety and security, disaster preparedness, health, education, and other public (or private) services. Technology can also assist in planning for growth and enabling e-governance.
- *Leverage existing engagement from U.S. firms and financiers in urban services.* For example, AT&T launched a Smart Cities program and is now partnering with the

city of Los Angeles to deliver new smart cell technology to drive traffic, public safety, and disaster preparedness improvements.<sup>6</sup> Cisco, Honeywell, Verizon, Current, and hundreds of smaller technology providers based in the United States are also providing urban solutions. JP Morgan has similarly launched a Global Cities Initiative, while Prudential Financial has indicated growing interest. Smart Cities are also a highly promising area for partnering with U.S. allies, such as Japan and Korea.

- *Demonstrate clear value addition from its tools and USDFC’s unique role in risk sharing.* Many technology-focused transactions are large and complex because they often involve multiple actors with a requirement to integrate various systems into one (e.g., transportation and safety). Most governments in emerging and frontier markets have limited human and financial resources to take on these multifaceted projects. Many are now looking to leverage private capital funding and build partnerships with technology companies. The USDFC could accelerate the development and financing of Smart City projects by deploying a range of products—loans, equity, and credit guarantees—as well as helping mitigate risk through technical assistance and partnerships with U.S. technology companies. In particular the USDFC could address gaps that an individual investor could not, such as:
  - Technical assistance for planning and governance. Helping cities prepare business and financial plans for core infrastructure could unlock major new investment opportunities.
  - Investment in data nerve centers. Cities need to develop the basic data systems to collect, process, analyze, and protect information across a network of sensors.
  - Citizen services, such as digital government, data dashboards, and performance monitoring.
  - Transportation management, including demand/supply modeling or systems for multimodal transportation integration.
  - Trade facilitation, such as creating connected corridors, freight platooning, and testing new autonomous vehicle applications.
  - Security systems, for instance cyber infrastructure plans, hardware, and standard setting.
  - Education technology, such as e-Learning and Smart Campus environments.

- Water services such as monitoring, quality, loss, and planning.
- Hard and soft energy infrastructure and technology (see Recommendation 2).

**Recommendation 2: Respond to huge unmet power needs by investing aggressively in both hard and soft energy infrastructure and technology.**

Power has been a traditional strength of OPIC’s portfolio. This must continue under the USDFC. Energy is a sector where the United States is a global leader and, when projects are well implemented, can have substantial positive impact in both the immediate future and long term. Energy systems that can deliver affordable, reliable electricity at scale can help to unlock economic growth, create employment, and support the expansion of a wide range of public and private services. Energy infrastructure can also present relatively large transactions and crowd in private capital, technology, and expertise. To accelerate the USDFC’s contribution to meeting the energy demand across emerging and frontier markets, the agency should:

- *Promote software, data management, and control systems needed for modern power systems.* New technologies in the power sector, such as machine learning for better system utilization, advanced control systems, and security infrastructure, are separate from building generation plants and power lines, but they create efficiencies and enable even greater investment. For example, better load management can allow new generation to be added to the grid, while data analytics to better understand supply and demand dynamics can mitigate risk to new projects.
- *View the current lack of reliability in many markets as an opportunity.* Batteries (e.g., the Tesla Powerwall) is one example of a product that meets a need for consumers living in places highly susceptible to weather-induced power outages. Demand-side power management technologies may be even more attractive in markets with endemic unreliability (e.g., Lagos or Karachi).
- *Leverage the clear U.S. comparative advantage in natural gas technology.* Many markets with large unmet power needs are also natural gas producers and/or potential gas importers. Countries across Asia, Latin America, and Africa could be more effectively utilizing their own resources and exploiting U.S. advanced technology to produce power and industrial production, maximize the economic and social benefits of natural gas, and limit the environmental footprint. The vast and diverse

number of world-leading U.S. firms in this sector presents a unique opportunity for USDFC expansion.

- *Carefully review policies to maintain relevance to today’s technology, including advanced nuclear.* To succeed, the USDFC must be aggressive and vigilant in enforcing its environmental and social policies to ensure that its activities are producing benefits and managing the inherent tradeoffs of all projects. However, such policies should not be static and must adapt to changing technologies and market trends. For example, the USDFC should consider modifying OPIC’s nuclear reactor exclusion to take account of new advanced models that did not exist when the policy was enacted. The United States is already modernizing its domestic regulatory and licensing regime to recognize technological changes.<sup>7</sup> A similar updated distinction may be warranted for development finance projects.
- *Work with other U.S. agencies to unstick bottlenecks, especially in transmission and distribution.* Cooperating with other agencies will be essential for USDFC’s success, including as an active participant in Power Africa, Asia EDGE, and other interagency initiatives. Patient risk capital from USDFC is particularly valuable in areas like electricity transmission where the needs are great, but the short-term commercial returns are less obvious.<sup>8</sup> Transmission bottlenecks continue to severely constrain power system expansion because of inadequate infrastructure, pricing policy deficiencies, and lack of long-term investment. Within the U.S. government, potential partners include the Millennium Challenge Corporation (which can provide grants for infrastructure development), the U.S. Trade and Development Authority (grants for feasibility studies), and the U.S. Agency for International Development (USAID) and State Department (policy reform and technical assistance).

**Recommendation 3: Close the digital divide with soft infrastructure investments.**

Digital infrastructure—such as broadband or fiber-optic internet cables, mobile telecommunications, online banking and e-payment systems, and other digital platforms—are as important in today’s global economy as roads and bridges. Access to information can bolster democracy, improve governance, and can potentially enable citizens to hold their leaders accountable. As countries move up the development ladder and their middle classes expand, citizens demand even more information and greater digital services. Businesses

require data and communications to function, to compete, and to grow. Digital infrastructure is a new necessity. Yet internet access is still missing for billions of people and the cost of broadband access is prohibitively expensive.<sup>9</sup> The opportunity for the USDFC is to:

- *Double down on Connect Africa*, OPIC's \$1 billion commitment over three years to support projects in telecommunications and internet access, logistics, value chains, and other essential infrastructure. This a good start, but opportunities in digital infrastructure in support of trade and commerce are vast.
- *Aggressively promote U.S. technology alternatives*. For the moment, the United States has an edge over China and other competitors in many parts of digital infrastructure. Companies from Silicon Valley, Seattle, Austin, Pittsburgh, Boston, and other hubs have the technical expertise for establishing and using networks to deliver digital services. Concerns over cybersecurity, cyber attacks, and digital espionage also may play to the U.S. advantage.<sup>10</sup>
- *Search for opportunities to pair infrastructure*. The USDFC should actively look to partner on projects where power lines, roads, tunnels, bridges, or other baseline infrastructure is being built so that U.S. companies can build the digital backbone for the internet at the same time. This saves money and time in the long term since most developing countries' citizens are already demanding universal access to the internet.

## CONCLUSION

When the USDFC opens its doors in October 2019, expectations will be tremendous. The White House, Congress, partner governments, business leaders in the United States and across emerging markets, and the American public all expect this new agency to have meaningful impact. The USDFC can best succeed by organizing around infrastructure opportunities in dense urban growth centers, the power sector, and in digital technology. ■

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# ANNEX 1: THE WORKING GROUP ON U.S. DEVELOPMENT FINANCE FOR INFRASTRUCTURE

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## ENDNOTES

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