

A Roadmap for Foreign Assistance to Support Quality Infrastructure

Findings and Recommendations from the
US Government Infrastructure Assistance Review

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About this Review

The Infrastructure Assistance Review examines the last decade of foreign assistance to understand what types of interventions in the early stages of the infrastructure project cycle could increase the pipeline of bankable, viable, quality infrastructure projects in low- and middle-income countries. It was guided by input from across the US government, coordinated by the Department of State Office of Foreign Assistance, in support of establishing a common understanding of recommendations to harmonize future assistance investments in quality infrastructure aligned with bilateral and multilateral goals.¹

This review offers recommendations on how to prioritize foreign assistance in these early stages of the infrastructure life cycle to reduce risk and improve the likelihood of private sector financing. The content of this review complements other US government (USG) efforts that are focused on later stage activities that focus more directly on financing. Attracting private capital for infrastructure projects in low- and middle-income countries will require strategic efforts on both fronts.

¹ Interagency partners included the MCC, the Department of Commerce, the Trade and Development Agency, the International Development Finance Corporation, the Department of the Treasury, the Department of State's Economic Bureau, and the Office of the Acting Special Coordinator for PGI.

EXECUTIVE SUMMARY

For too many low- and middle-income countries, the demand for quality infrastructure and investment is outpacing the supply of well-developed projects, jeopardizing our shared vision of a free, open, secure, and prosperous future. Closing this gap has been the subject of many US government efforts, including the Better Utilization of Investments Leading to Development Act of 2018 (BUILD Act), which created the US International Development Finance Corporation (DFC), and the launch of the Partnership for Global Infrastructure and Investment (PGI) initiative at the G7 Leaders' Summit in 2022. And for more than 20 years, the Millennium Challenge Corporation (MCC) has incentivized policy and institutional reforms alongside its grant financing for large infrastructure projects. These initiatives are premised on the understanding that infrastructure investment is a crucial contributor to inclusive, sustainable growth, and that private capital will be critical to any solution.

Infrastructure investments are a priority for developing countries, which recognize those investments as a foundation for their long-term sustainable growth and economic development. To close the infrastructure investment gap, the international community has focused on mobilizing public and private financing. There has been less attention to how to effectively use available resources, such as foreign assistance, to build the pipeline of viable, finance-ready (i.e., “bankable”) projects that are attractive for such investments.

This review responds to the US government's desire to close that gap by examining the last decade of US foreign assistance to better understand what types of interventions in the early stages of the infrastructure project cycle could increase the pipeline of quality infrastructure projects in low- and middle-income countries. The purpose of this review is to provide general recommendations, grounded in lessons learned from prior foreign assistance resources and projects, to address the growing need for high-quality infrastructure. For the purpose of this review, *quality infrastructure projects* are defined as those that are environmentally and socially sustainable, resilient, open and inclusive, transparent, debt-sustainable, economically efficient, and able to attract private-sector financing.

Based on a multifaceted methodology (Box 1), the review identifies the most pressing limitations that hinder the development of a robust pipeline of viable, bankable quality infrastructure projects in low- and middle-income countries during the earliest stages of the project cycle. Limitations identified span the infrastructure landscape, ranging from partner country challenges relating to uneven investments in national capacity to donor challenges related to coordinating project preparation assistance.

Strategically executed foreign assistance can help address these limitations through:

- 1. Increasing demand for quality infrastructure by clarifying and communicating its benefits** to relevant stakeholder groups
- 2. Enhancing existing coordination within the USG and strengthening partnership among bilateral and multilateral donors** as a means for identifying and building on comparative strengths
- 3. Creating an infrastructure localization agenda** following principles that employ a locally led and codesigned approach to quality infrastructure
- 4. Integrating quality infrastructure tools into the USG program cycle** by adapting existing domestic and international tools for development professionals across sectors
- 5. Harmonizing and refining project preparation assistance** to bolster a pipeline of bankable, quality projects

Box 1. Overview of US Government Infrastructure Assistance Review Methodology

1. **Mapping** of 80+ USC programs, tools, and investments within and across federal agencies working throughout the infrastructure life cycle
2. **Literature review** of 50+ published articles and reports (peer-reviewed and grey literature) on quality and sustainable infrastructure, infrastructure investments, foreign assistance, and private capital mobilization
3. **Key informant interviews** of 75+ experts from across the public, private, and research sectors
4. **Review** of 188 project and program evaluations and reports within the renewable energy infrastructure sector, drawn from the US Agency for International Development's (USAID's) Development Experience Clearinghouse (DEC), the Millennium Challenge Corporation (MCC) Evidence Platform, and the Department of State's internal registry, including a full analysis of 14 project and program evaluations
5. **Country analysis** of two cases of US foreign assistance interventions (Indonesia and Kenya)

Filling the quality infrastructure gap requires a well-thought-out, highly coordinated, and carefully balanced portfolio of assistance activities across multiple stages of the infrastructure life cycle—including enabling conditions, project preparation and design, and finance. Implementing these five recommendations would support the US effort to lead on quality infrastructure, further its geopolitical objectives, and align behind its partners' growth and development.

SUPPORTING INFRASTRUCTURE DEVELOPMENT THROUGH FOREIGN ASSISTANCE INTERVENTIONS

Infrastructure investments are significant for emerging economies, whose governments prioritize them as a foundation for their sustained development (Foster et al. 2023; Linehan 2024). While international donors have sought to mobilize new forms of funding to support those needs, public investments in infrastructure remain limited (Gurara et al. 2017). There is widespread international agreement that public resources alone will be inadequate to close this infrastructure investment gap, estimated at \$15 trillion by 2040, leading to calls to catalyze significant private capital to support infrastructure (Global Infrastructure Hub 2018, Saner et al. 2021). Yet, the underlying conditions of low- and middle-income countries—real and perceived political risks, country-level challenges with corruption and transparency, insufficient local capacity, and weak regulations and enforcement—have led to a lack of viable, bankable projects and investments (Losos and Fetter 2022, Moore 2018).

To address these weaknesses, the USG has used foreign assistance to help build a pipeline of attractive infrastructure proposals. Federal agencies have a range of foreign assistance programs and mechanisms to support infrastructure development, especially linked to financing during later stages of the infrastructure project life cycle. Examples of such foreign assistance interventions are the US Department of Commerce's loan guarantees and US-AID's Climate Finance for Development Accelerator. The United States also provides financing through the DFC.

Foreign assistance interventions in early stages of the project life cycle can also be very impactful, particularly when they are well-connected to downstream activities or planned with future investments in mind. Exemplary early-stage (upstream) programs within US agencies, as identified for this review by key informants, include the following ([Appendix D](#) contains a full description of each):

- **MCC compacts and threshold programs** incentivize policy and institutional reforms that create an enabling environment for private-sector investment through its program requirements;² offer strategic, financial, and technical advisory support to create pipelines of investable opportunities; and provide high-quality grant financing to crowd-in commercial finance and bring financially viable transactions that meet international standards to market.
- The **Commercial Law Development Program (CLDP)** in the Department of Commerce works upstream to create an enabling environment for the successful tendering of infrastructure projects and ultimately lays the necessary groundwork to attract private-sector financing.
- The **Global Procurement Initiative (GPI)** from the US Trade and Development Agency (USTDA) works directly with partner government officials to improve public procurement systems by focusing on achieving greater value-for-money for public investments.
- The **Transaction Advisory Fund (TAF)**, within the Infrastructure Transaction Assistance Network (ITAN), provides on-demand, best-in-class legal and consultative services to partner country governments in support of the development of quality, sustainable infrastructure proposals.
- **Power Africa**, an interagency program housed in USAID, accelerates the pipeline of quality infrastructure through its integrated focus on all stages of the infrastructure project life cycle.

THE NEED FOR QUALITY INFRASTRUCTURE

This review focuses explicitly on *quality infrastructure*, which has been one of the primary foci of US assistance in recent years. Understanding what comprises quality infrastructure has been an evolving policy process. In 2016, United Nations member states unanimously

² To become eligible for MCC assistance, countries are expected to meet eligibility standards related to good governance that are clearly and transparently measured by country scorecards. In several cases, countries have carried out reforms with the specific goal of improving their scorecard to become eligible before receiving any MCC funding. The incentive is often referred to as the "MCC Effect."

Residents
using lights
powered
by Off-
Grid:Electric's
solar service,
mPower.

Photo courtesy
Power Africa



agreed to the need for quality and resilient infrastructure as a development goal, codified in UN Sustainable Development Goal 9 on Infrastructure and Investment (United Nations 2015b). In 2018, following two years of deliberation, the Inter-American Development Bank provided the inaugural definition of *sustainable infrastructure*—a closely related classification—as projects that are “planned, designed, procured, constructed, operated, maintained, and decommissioned in a manner that ensures economic and financial, social, environmental (including climate resilience), and institutional sustainability over the entire infrastructure life cycle” (Inter-American Development Bank 2018). Concurrently, the G7 and G20 and their partners produced a series of foundational publications laying out a framework for promoting quality infrastructure across the entire project life cycle, including the G7 Ise-Shima Principles for Promoting Quality Infrastructure Investment, the Charlevoix Commitment on Innovative Financing for Development, Roadmap to Infrastructure as an Asset Class, and the G20 Principles for Quality Infrastructure Investment (QII) (Box 2) (G7 and Ministry of Foreign Affairs of Japan 2016, G7 and Global Affairs Canada 2018, OECD 2019).

Meanwhile, in 2019, the governments of the United States, Japan, and Australia announced the development of the Blue Dot Network (BDN) to help identify the attributes that make an infrastructure project *high quality*. In 2024, the BDN Steering Committee (the United States, Japan, Australia, the United Kingdom, Spain, Switzerland, and Türkiye) established a BDN Secretariat at the OECD. As part of the BDN, the OECD translated the quality infrastructure investment principles into specific standards and performance indicators that could be used to certify quality infrastructure projects. The first three Blue Dot network–

Box 2. Defining Quality Infrastructure

The use of the term *quality infrastructure* often applies not only to a project or system but to the entire life cycle of a project or system, how it is built, who it benefits, and the enabling conditions within which it is created (OECD 2020). For purposes of this review, we define *quality infrastructure* as “projects or systems that are environmentally and socially sustainable, resilient, open and inclusive, transparent, debt-sustainable, economically efficient, and financially viable.” This definition is based on the BDN 10 Elements (BDN 2024), which represent the high-level objectives that the BDN seeks to promote. The 10 Elements—derived directly from the G20’s QII Principles (G20 Infrastructure Working Group 2018)—include the following:

1. Promote sustainable and inclusive economic growth and development
2. Promote market-driven and private sector-led investment, supported by judicious use of public funds
3. Support sound public financial management, debt transparency, and project-level and country-level debt sustainability
4. Build projects that are resilient to climate change, disasters, and other risks, and aligned with the pathways toward 2050 net-zero emissions needed to keep global temperature change of 1.5°C within reach
5. Ensure value-for-money over an asset’s full life-cycle cost
6. Build local capacity, with a focus on local skills transfer and local capital markets
7. Promote protections against corruption while encouraging transparent procurement and consultation processes
8. Uphold international best practices of environmental and social safeguards, including respect for labor and human rights
9. Promote the nondiscriminatory use of infrastructure services
10. Advance inclusion for women, people with disabilities, and under-represented and marginalized groups

certified infrastructure projects were announced in late 2024.³ The G7 Leaders' Communique of June 14, 2024, acknowledged BDN's potential to attract private investment, improve enabling environments, and advance high standards for quality infrastructure (The White House 2024).

In 2022, the United States, with its G7 partners, announced the PGI, drawing heavily on the Quality Infrastructure and Investment (QII) Principles. PGI promotes infrastructure investments that deliver high benefits at low long-term cost in terms of contribution to sustainable growth and development, well-being, environment and ecosystems conserved, enhanced economic activity, as well as financial sustainability (The White House 2023). Through PGI, the United States seeks to mobilize 200 billion dollars over five years through grants, federal financing, and leveraging private-sector investments.

FOREIGN ASSISTANCE ACROSS THE INFRASTRUCTURE PROJECT LIFE CYCLE

Generally, the *infrastructure project life cycle* is understood as the “interrelated phases of infrastructure development, starting from early-stage efforts such as planning and prioritization, to mid-stage efforts like design and procurement, and ultimately construction, operation, maintenance, and decommissioning or repurposing” (OECD 2021).⁴ Little attention has been given to how foreign assistance programs and tools relate to each of these phases. As a result, foreign assistance practitioners often fail to connect their interventions at various stages of the infrastructure project life cycle with the advancement of quality infrastructure projects.

To address this disparity, this review presents a **US Government Infrastructure Foreign Assistance Project Life Cycle**. This life cycle, built from several existing frameworks,⁵ has four overlapping stages: (1) enabling environment and early project preparation, (2) design and feasibility, (3) financing, and (4) implementation and maintenance. [Table 1](#) provides a brief description of the infrastructure development activities within each stage of the life cycle and potential corresponding foreign assistance interventions.

What stage of the infrastructure project cycle do most federal foreign assistance programs target? Using the US Government Infrastructure Foreign Assistance Project Life Cycle, we mapped existing USG programs and mechanisms that support infrastructure development across all project stages. We found more than 80 programs and mechanisms spanning

³ FAST-Infra, developed through private- and public-sector financial institutions, is developing a similar approach focused on labeling sustainable infrastructure projects, in line with the IDB definition of sustainable infrastructure. Developers of BDN and FAST-Infra are working toward mutual recognition of the two initiatives.

⁴ It should be noted that there does not exist a single, widely accepted definition for the infrastructure life cycle. Our literature review reveals that, though “infrastructure life cycle” is a recurring term in the literature, it is often undefined and not linked to an established framework or definition. Organizations such as OECD have presented different frameworks of the infrastructure project life cycle in different publications.

⁵ The primary existing frameworks this review draws from include the TPCC Infrastructure Export Tools (International Trade Administration n.d.), the OECD Compendium of Policy Good Practices (2020), the Sustainable Infrastructure Tool Navigator (GIZ Infrastructure Solutions Incubator n.d.), and the Global Infrastructure Hub's Leading Practices in Governmental Processes Facilitating Infrastructure Project Preparation (2019).

Table 1. Proposed US Government Foreign Assistance Infrastructure Life Cycle

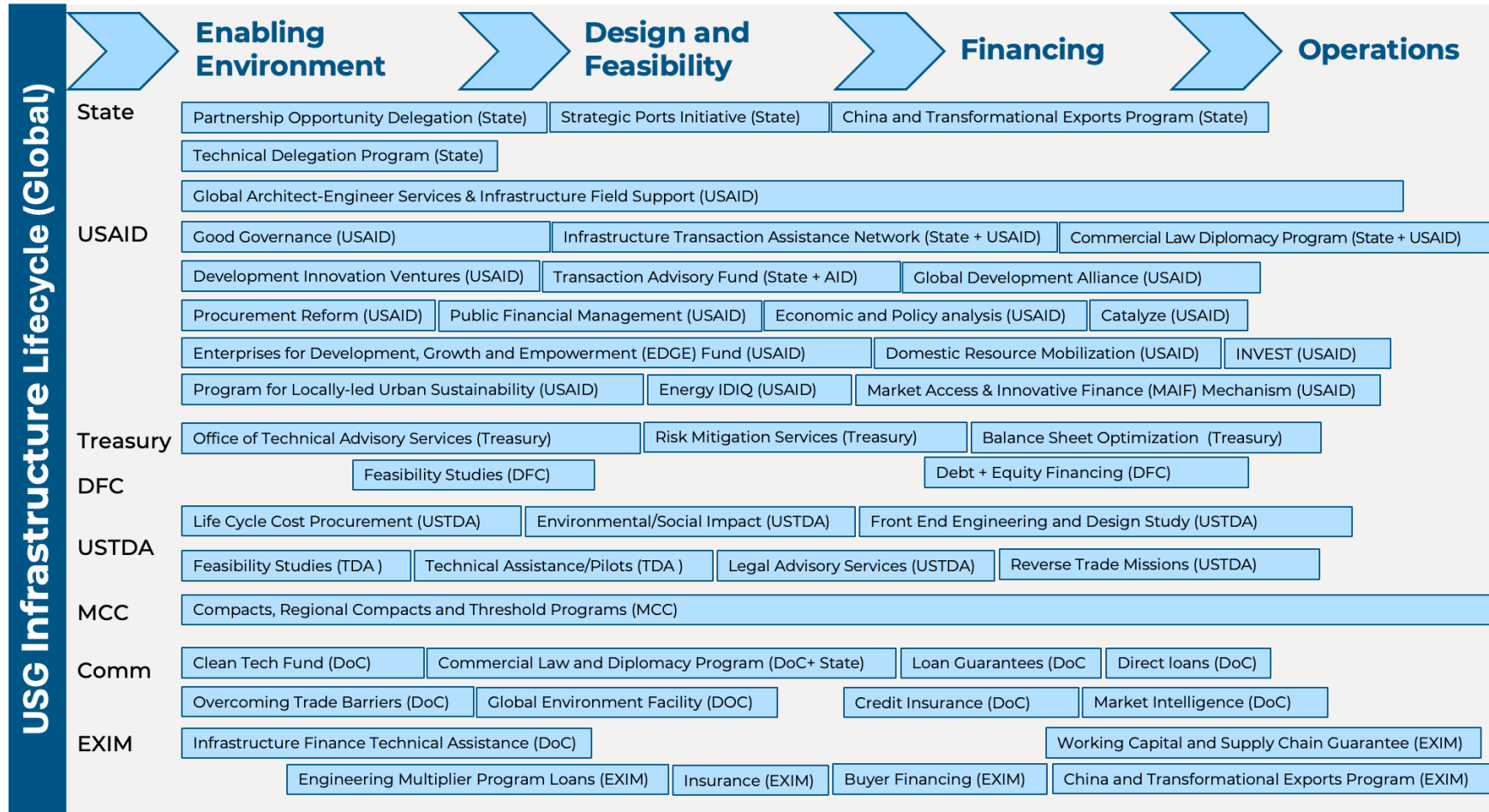
| Life Cycle Stage | Definition of Life Cycle Stage | Description of Potential Foreign Assistance Interventions |
|---|---|--|
| 1. Enabling environment and early project preparation | Creation of a conducive environment for preparing quality infrastructure projects, including strategic planning and project prioritization. Early-stage project preparation occurs during this stage. Activities in this phase are often considered upstream. | Technical assistance and capacity development efforts support early-stage infrastructure project preparation particularly focused on improved governance, planning, institutional capacity development, policy frameworks, and regulatory reform. |
| 2. Design and feasibility | Late-stage project preparation, including assessments to determine resource requirements and availability for project. Stakeholder engagement is considered an important component in this phase. | Interventions focus on supporting project design with an emphasis on ensuring viable projects based on local need and priorities, with an emphasis on local input on design. |
| 3. Financing | Activities addressing how to pay for a given infrastructure project. | Interventions focus on efforts to attract or support financing for infrastructure projects. This includes direct or blended financing, efforts to develop the ability of partner government to invest in financing infrastructure projects, and mobilizing private-sector capital through derisking financial instruments. |
| 4. Implementation and maintenance | Infrastructure project construction, maintenance, and upkeep. This phase also includes the end of the life of an infrastructure asset—disposal and decommissioning. | Interventions focus on the direct support and oversight of construction, operation, or decommission of a project. |

multiple agencies, including the Departments of State, Commerce, and Treasury; USAID; USTDA; DFC; MCC; and the Export-Import Bank of the United States [EXIM]). As seen in Figure 1, the scope and scale of these programs and mechanisms are vast. Further enhanced connectivity across related programs would enable leveraging of tools, networks, and resources, scaling and multiplying results and impact.

LESSONS FOR QUALITY INFRASTRUCTURE

Given the developmental and geopolitical importance of addressing the infrastructure gap in low- and middle-income countries and the recent ambitious commitment of the USG and its allies to increase public and private investments in quality infrastructure, the role of US foreign assistance has taken on heightened importance. As discussed previously, a multitude of federal programs exist across the USG, covering a wide range of different geographies, infrastructure sectors, and infrastructure project life cycle stages. Collectively, do these efforts effectively support the development of quality infrastructure and, if not, what is preventing USG efforts from achieving their full potential? Specifically, how can foreign assistance funding be used strategically in the upstream stages of project development to increase the

Figure 1. USG programs and mechanisms that operate across the infrastructure life cycle





USTDA hosted a Reverse Trade Mission in November 2014 to familiarize Brazilian public- and private-sector entities with the latest best practices in US unconventional gas development

Photo courtesy
USAID

pipeline of bankable quality infrastructure? To address these questions, this review undertook research to identify key lessons related to promoting quality infrastructure development through foreign assistance. The review used key informant interviews (KIIs), a review of renewable energy–related program and project evaluations, and a literature review. [Appendix C](#) provides a full description of the methodology used and summary of metadata.

Through the literature review, analyses, and interviews, we identified five challenges that, if addressed, could improve the application of foreign assistance to promote quality infrastructure in low- and middle-income countries.

The Concept of Quality Infrastructure Requires Better Clarity

A consistent concern raised in KIIs and renewable energy–related program evaluations was that, despite the broad consensus that high-quality infrastructure is the north star for investments and development, confusion abounds as to what “quality infrastructure” is in practice. Many stakeholders lack clarity as to how the quality infrastructure concept translates into project selection, design, and implementation. These sources identified a significant need for well-defined and broadly communicated guidance, standards, and/or associated indicators to clarify what fits the designation of quality infrastructure.

A related need, identified largely through KIIs, was for project-level data that could tangibly demonstrate the benefits of investing in quality infrastructure. Because a commitment to building quality infrastructure, with its focus on long-term economic, social, and environmental benefits, also requires significant financing resources, longer time horizons, and thorough processes, complying with the tenets of quality infrastructure may be regarded as

at odds with a partner country's other political or economic priorities. Key informants noted the lack of evidence-based arguments that could better communicate the value of investing in quality infrastructure. Such information is needed to support stakeholder decision-making, especially when faced with short-term political and financial trade-offs.

Box 3. Best Practices for Interagency Roles

To support Kenya's Kipeto Wind Farm, each USG entity brought to bear its relevant foreign assistance tools at the right strategic moment. To prepare and finance the Kipeto project, Power Africa—a USG-led partnership between the private sector, international development organizations, and governments that is housed in USAID—supported early transaction advisory services, DFC's predecessor organization—the Overseas Private Investment Corporation—provided critical \$230 million in financing, and the USTDA provided project preparation assistance in an area of US private-sector competitiveness. Concurrently, USAID took on the responsibility of helping governments adopt and implement policy, regulatory, and other reforms necessary to attract private sector engagement in the energy and power sectors. As a result, the Kipeto Wind Farm has generated reliable and cost-effective electricity supply that has promoted economic growth and development of the region.

Play to Agencies' Comparative Advantages

While interagency coordination of infrastructure-related foreign assistance exists, key informants identified opportunities for enhancement. They noted that strengthening communication channels, reducing compartmentalization between agencies, and creating stronger incentives for collaboration within USG agencies and among donors could further improve the effectiveness of our coordinated efforts.

Across the USG, agencies demonstrate varying levels of collaboration in their infrastructure-related initiatives. Key informants noted many instances where improvements to coordination could better leverage the comparative advantages of US institutions. For example, DFC's exceptional tool set (e.g., loans, loan guarantees, political risk insurance, equity and technical assistance) could collaborate with and complement the work of other US agencies that lack these capabilities. However, DFC's limited staff in the field makes integration with other agency staff challenging. Meanwhile, despite the fact that USAID has extensive staff on the ground with deep knowledge of many of the enabling conditions—regulations, corruption, and transparency—its staff are often not well-integrated into USG infrastructure development projects. Further, while USTDA is well-regarded for its excellence in project preparation, it was noted that their feasibility studies are often not used by other agencies or donors, thus potentially diminishing any positive outcomes. Finally, MCC's unique operational structure (i.e., compacts that follow stringent eligibility requirements and strict five-year terms) supports a streamlined and effective approach to planning and executing infrastructure projects. However, the lack of a formal mechanism to identify how other USG agencies might stay involved after MCC's compact terminates potentially diminishes the long-term impact of MCC projects.

Box 4. Indonesia Interagency Cooperation

During the preparation for Indonesia's new MCC compact, it became clear that there were untapped opportunities for local financing of municipal infrastructure. However, the expertise to pursue these activities did not exist within the government of Indonesia, local Indonesian municipalities, or MCC. To address this gap, the US Department of Commerce's CLDP was brought in to provide legal and regulatory technical assistance to the Coordinating Ministry for Economic Affairs (Kemenko) related to the issuance of municipal bonds. CLDP's technical advice, training, and financing filled a critical gap by assisting Kemenko in enacting the implementing legislation and training local personnel on how to issue municipal bonds. After CLDP completed its engagement, MCC and the World Bank took on the next stage of working with municipalities to pilot this innovative bond issuance project.

Key informants also identified cases where interagency and/or interdonor actors prioritized coordination. In these cases, donor assistance for quality infrastructure tended to be more efficient and effective (Boxes 3 and 4). Key informants mentioned a range of coordination actions that could potentially transform foreign assistance outcomes, such as agencies collaboratively identifying needs, aligning agency programs, and allowing agencies to play to their strengths. Leadership from the top, such as an ambassador or agency leadership, can be a critical factor promoting interagency coordination (Box 5).

Box 5: Leadership at the Top

Interagency coordination within a country is most effective when there is strong leadership from the top. In Kenya, the US ambassador has actively and successfully enabled interagency coordination for topics such as quality infrastructure investment in her drive to promote economic growth. As a result, the embassy established an economic growth working group with a broad interagency membership to cultivate and track opportunities for US engagement in the infrastructure and trade sectors. The ambassador brought in the participation of USAID, which ensured that enabling conditions that affect infrastructure development were being considered from the earliest planning stages by the entire working group. This leadership and vision from the highest level at the embassy has helped to provide a cohesive effort.

Local Capacity, Autonomy, and Ownership Need Strengthening

Renewable energy-related program and project evaluations and KIIs frequently identified the lack of local capacity in partner countries as a major limitation in the planning, building, and financing of quality infrastructure in low- and middle-income countries. Local technical capacity in the public and private sectors—ranging from strategic planning to tender development to procurement—often presents the most fundamental barrier to infrastructure development.

Our literature review suggested that investment in local capacity is most effective when it is responsive to local needs and sustained through time. Our review of project evaluations revealed a wide range of training needs in project design, project management, procurement, construction strategy, feasibility studies, and contractor hiring and management.⁶ Multiple evaluations found that well-designed training and tools improved a partner government's ability to strengthen regulations and enforcement, identify and plan for infrastructure development, track progress, and adapt processes during and beyond the life of a foreign assistance project.⁷

Box 6: Local Support Through the GPI

USTDA's GPI established a three-year partnership with Indonesia's National Public Procurement Agency to provide comprehensive training to Indonesian procurement officials on value-based procurement practices and policies. The GPI's trainings introduce tools such as life-cycle cost analysis, total cost of ownership, and cost savings over time. In particular, the trainings emphasize the importance of conducting procurements in a fair and transparent manner to boost efficiencies and reduce corruption. The adoption of value-based procurement mechanisms and models in Indonesia are fostering more sustainable, competitive and cost-effective infrastructure investments.

⁶ The following reports illustrate the range of training needs: *MCC Indonesia Procurement Modernization Project Evaluation—Final Evaluation Report* (Abt Associates 2020), *Evaluation of the REPOWER Activity and Energy Sector Assessment Final Report* (IMPAQ International 2018), *Performance Evaluation of USAID/Vietnam Low Emission Energy Program (V-LEEP)* (Management Systems International 2018), and *USAID/Mexico Municipal Development Through Infrastructure Financing Activity: A Performance Evaluation* (Lorenzo Alonso et al. 2019).

⁷ For example, a USG project in Indonesia focused on clean energy provided technical assistance that integrated ArcGIS data and tools into the quality infrastructure planning process, which ultimately enabled energy authorities to improve planning and prioritization efforts for grid design and electrification (Abt Associates 2020). Similarly, a USG project in Nigeria focused on the supply side of clean energy provided trainings focused on loan activities, due diligence, and preparing bankable projects, which led to an increase in viable projects in the pipeline and an increase in loans. The ripple effect of the training, mentoring, and due diligence reports performed as a part of the program were found to continue well after the completion of the project (DevTech Systems 2018).

Some evaluations found that trainings that targeted diverse stakeholders (such as both the private and public sectors) or occurred at the subnational level were effective at increasing the number of viable projects in the pipeline as well financing for such projects (Dev Tech Systems 2018). Others noted that improving connectivity with local institutions to continue to sustain training access is a gap in program design that can be easily remedied.

Additionally, consultations with key informants revealed additional transformative capacity development efforts beyond those captured in the evaluations, such as USTDA's GPI (Box 6).

Existing Tools Can Help Close Gaps

Our literature review, informant interviews, and evaluations revealed that a vast array of quality infrastructure tools and programs already exist, both within and outside the USG, that can support the work of federal agencies. Yet, according to KIIs, most generalist staff—that is, those who do not specialize in infrastructure development—cannot easily identify and access the appropriate tools that would allow them to advance quality infrastructure development.

Our review found a range of internal tools helpful for advancing the development of quality infrastructure, especially within USTDA and MCC. USAID is currently creating a toolkit to help its mission staff incorporate environmental and social safeguards into energy infrastructure planning (Box 7). However, these tools and initiatives remain agency-specific, which discourages interagency coordination and alignment.

The review also identified many externally developed tools that are valuable but rarely mainstreamed into USG infrastructure efforts. One example is SOURCE, a G20 initiative developed for multilateral development banks (MDBs). SOURCE is an online infrastructure project preparation software platform that assembles infrastructure-related data on technical, economic, legal, governance, financial, environmental, and social considerations (SIF 2023). The data platform can improve consistency, quality, transparency, and accountability of infrastructure. Further, the German Agency for International Cooperation's Sustainable Infrastructure Tool Navigator is another existing online platform that helps users identify

Box 7: USAID Energy Infrastructure Planning Tool Kit: Integrating Environmental and Social Safeguards

USAID is developing an environmental and social safeguard tool kit that aims to assist its missions in enhancing energy infrastructure planning. With a focus on the early stages of the program cycle, the tool kit will help USAID mission staff understand and assess environmental and social trade-offs, weighing immediate goals and long-term sustainability. The tool kit will consist of individual topical modules, linked by an easy-to-navigate table of contents, including guiding questions, resource links, and case studies. It will highlight a curated selection of tools and resources, with additional materials for deeper exploration. Initially targeted at USAID technical staff, it will be designed to be adaptable for a broader audience and across multiple infrastructure sectors where relevant.

the most relevant tools for their needs and goals (GIZ Infrastructure Solutions Incubator n.d.) The Tool Navigator provides a global clearinghouse of tools and programs available to address infrastructure development needs at different stages of the project cycle, in different sectors, and addressing different development and finance concerns. Further, the World Bank and Public-Private Infrastructure Advisory Facility have assembled an overview of tools and products that are used to support the development of infrastructure through public private partnerships (PPPs) (Jones 2022). Initiatives such these are not explicitly designed to address USG agency needs but could potentially be adapted to do so.

Supporting Project Preparation Increases Viability

The USG devotes significant resources to project preparation assistance, mostly through mechanisms and programs within its own agencies. USTDA is one of the world's largest and oldest organizations that assists with the early development of infrastructure projects. Meanwhile, both MCC and DFC have their own project preparation support resources and requirements (e.g., MCC's ATLAS Project, see [Box 8](#)).⁸ Because USG agencies operate at different stages of the project life cycle, the project preparation assistance they provide varies. For example, USTDA feasibility studies are generally conducted at an earlier stage than those carried out by DFC.

Their needs and requirements also differ. For efficiency, project preparation assistance is ideally coordinated to facilitate a hand-off as a project moves through the development stages. Our research identified examples of projects with USTDA feasibility studies that later

Box 8: The Advancing Transport and Logistics Accessibility (ATLAS) Project

The ATLAS Project is a part of a five-year MCC compact with Indonesia focused on infrastructure and financing. The objective of the \$350 million ATLAS Project is to improve transport planning and preparation in target Indonesian provinces, responding to the root cause of inadequate infrastructure project preparation. Poor project preparation leads to worthwhile projects failing to attract appropriate financing, resulting in costly and underdeveloped financial intermediation. Improved planning and preparation will make transport projects better positioned to attract appropriate sources of finance, including blended and green finance, thus maximizing infrastructure investment across Indonesia. Improved infrastructure planning and preparation encompasses improving approaches to planning, procurement, implementation, operation and maintenance to further improve value for money throughout the infrastructure project life cycle. Achieving these goals requires transformational reform, including legal and regulatory adjustments, institutional restructuring and strengthening of capacities and business processes across various government organizations and the private sector, including the ongoing alignment of subnational reforms and corresponding national level reforms and policy directions.

⁸ MCC project preparation tends to focus on upstream activities, with programs supporting activities aimed to improve a partner country's enabling conditions. DFC undertakes traditional project preparation activities for projects that it anticipates financing.

receive DFC financing, such as the Golomoti project in Malawi, which is sub-Saharan Africa's first utility-scale solar plus storage project.⁹

Most PPFs, however, are outside of the USG. For example, the Global Infrastructure Facility (GIF), a G20 initiative housed at the World Bank, was repeatedly identified by key informants for its comprehensive services in helping prepare high-quality infrastructure projects for MDB funding. GIF often engages in projects at their earliest stages—focusing on enabling conditions—and takes them all the way through to financial close.

Our KIIs and literature review found that assistance with project preparation is often instrumental in building a pipeline of quality infrastructure projects. Yet they also revealed that, as the use of project preparation assistance has expanded, some weaknesses in the approach have emerged. For example, because potential applicants often lack the bandwidth to comply with multiple different iterations of similar-but-different PPF, the proliferation of new PPFs in recent years has diminished their value (Social Impact 2018). Greater coordination of project preparation efforts is needed to maximize effectiveness (Global Infrastructure Hub 2019). Additional visibility of the wide range of available project assistance would enhance the ability to coordinate and streamline PPFs (SNV USA 2016).

The review also found that the vast majority of PPFs are concentrated in the mid-to-late-stage phases of the infrastructure project development, when the project is well along the way toward financing. We discovered few examples of PPFs—beyond the GIF—operating early in the project life cycle, when they could be used to address macro-level issues that impact bankability such as improving the upstream enabling environment and public investment efficiency (Aizawa 2022, Schneider-Roos et al. 2014).¹⁰

Documenting and replicating such best practices can ensure a coordinated approach which avoids overlapping project preparation services.

⁹ USTDA supported the Golomoti project soon after the developer had won a first-in-market tender, and DFC was able to commit financing toward the end of the project's construction period. Another successful collaboration was on the CECA gas-fired power project in Sierra Leone, where a DFC loan and political risk insurance followed a USTDA feasibility study.

¹⁰ Key informants noted that this upstream assistance is particularly unattractive to private investors given that projects are most risky at this stage and less likely to yield a return on investment.

A ROADMAP FOR USG ASSISTANCE IN SUPPORT OF QUALITY INFRASTRUCTURE

This review aims to identify upstream foreign assistance interventions that can increase the pipeline of quality infrastructure projects that address partner countries priorities and are attractive for private sector financing. Building on lessons learned—as described in the previous section—we offer five broad recommendations. For each, we propose specific actions items the USG could take to operationalize the recommendations. These recommendations, taken jointly, could form the basis of a US Strategic Framework for the Advancement of Quality Infrastructure, helping advance US leadership in global quality infrastructure development.

Box 9. Recommendations Pillars

1. Communicate the benefits of high-quality infrastructure
2. Improve coordination within the USG and among bilateral and multilateral donors to build on comparative strengths
3. Develop a locally led quality infrastructure agenda
4. Integrate quality infrastructure tools into the foreign assistance program cycle
5. Harmonize and integrate project preparation activities

An innovative agreement among the US government's development finance institution, the International Finance Corporation, ContourGlobal, the government of Senegal and Senegal's national electricity utility, helped advance a 53-megawatt project that will address the growing demand for electricity in Senegal

Photo courtesy USAID



1. Communicate the Benefits of High-Quality Infrastructure

A cohesive communications strategy is needed to convey what quality infrastructure is and why investing in quality infrastructure advances critical development objectives for the USG and its partners.

To clarify the definition of *quality infrastructure* and catalyze adoption of the term within the USG, we recommend establishing a Quality Infrastructure Interagency Policy Subcommittee with the goal of producing a clear and easily conveyed definition of quality infrastructure that can be incorporated into the Strategic Framework for the Advancement of Sustainable Infrastructure. This policy process should create guidance for applying the term in diverse contexts and mainstreaming its use into all foreign assistance activities. We recommend that the policy process adopt the definition for quality infrastructure established by the G20 QII Principles and further developed in the certification framework of the BDN. To integrate the term into foreign policy programs, the interagency policy discussion should also codify the use of US Government Infrastructure Foreign Assistance Project Life Cycle ([Table 1](#)).

Clarifying the definition and benefits of quality infrastructure is also important when working with partner countries. As part of the Strategic Framework, the USG should also provide guidance on communicating how quality infrastructure benefits country partners economically, socially, and environmentally. For example, the framework might call for the documentation of short- and long-term benefits and costs of quality infrastructure across these dimensions vis-à-vis competing models that provide lower-quality infrastructure. The Strategic Framework might also establish a repository of good practice case studies that highlight how quality infrastructure can fulfill specific and time-bound country needs, such as enhancing resilience during and after natural disasters (Hossain et al. 2017; Doumbia and Lauridsen 2019).

2. Improve Coordination Within the USG and Among Bilateral and Multilateral Donors to Build on Comparative Strengths

Coordinating foreign assistance—both within the USG and with outside donors—can improve its management efficiency, ultimately resulting in greater development impact. As a first step toward improving donor coordination, we recommend that the Strategic Framework articulate clear roles and responsibilities for each USG department and agency that contributes to quality infrastructure development, specifying the lead agency for different tasks and the supporting agencies' roles.¹¹

Delineation allows for greater cohesion, efficiency, and effectiveness within the government and more transparency for those navigating the US system. With clearly defined and articulated roles, missions and country partners would know, for example, that to promote renewable energy, MCC could provide grants for partners to build out a sustainable power grid and implement utility reforms to improve the sector's commercial viability¹² and then DFC could complement these activities with technical assistance for feasibility studies, loans, guarantees, and political risk insurance to build power systems. This kind of effective coordination, enabling different agencies to play to their comparative strengths, has worked well for Kenya's Kipeto Wind Farm project ([Box 3](#)).

¹¹ Power Africa was an often-referenced example of effective government coordination, made possible by clear interagency roles and triage priorities as well as ample resources to generate real development impact. See [Appendix D](#) for further details.

¹² Within eligible countries where power has been identified as a binding constraint to growth.

As part of this review, we created an initial mapping of USG department and agency roles and responsibilities for quality infrastructure with the intent of identifying gaps and opportunities ([Appendix E](#)). Based on that mapping, we recommend the five primary lanes:

1. The Department of State leads USG investments in quality infrastructure by **setting the overarching foreign policy objectives**, including directing diplomatic engagement and foreign assistance implementation.
2. USAID and MCC (where appropriate¹³) identify **alignment between foreign policy and development priorities**, including leading implementation of those priorities with respect to enabling environment and capacity-building
3. DFC, the Department of the Treasury, USAID, and MCC (where appropriate) **support those priorities through a range of agency-specific tools** such as financing mechanisms, efforts to enhance the investment climate, and infrastructure-enabling policy and institutional reforms
4. USTDA, USAID, the Department of State, MCC (where appropriate), and DFC **provide project preparation assistance**
5. The Department of Commerce, USTDA, and EXIM broaden the aperture by **cultivating opportunities and incentives to engage the US private sector**

After clarifying roles, we recommend the Strategic Framework direct the establishment of interagency teams within missions that holistically focus on the development of quality infrastructure. For embassies where Deal Teams¹⁴ are already operating well, this might include a refresh of the mandate. For other missions, new country-level USG working groups on quality infrastructure would need to be created, with representation from all relevant agencies.

Working groups would focus on all stages of infrastructure development—from preproject planning and enabling conditions through finance close, implementation, and monitoring. They could use the proposed US Government Foreign Assistance Infrastructure Project Life Cycle to support coordination efforts by making it easier to identify along the life cycle where there may be gaps or opportunities to redirect resources. The life cycle, for example, could prove useful for mapping out existing cross-agency activities at the mission level as an initial starting point for where new programs or resources could close identified gaps. With strong leadership support, these working groups could jointly address all the recommendations of this review (including developing a localization agenda and syncing project preparation assistance planning).

¹³ For instance, MCC operates only in partner countries that meet specific eligibility criteria.

¹⁴ Embassy Deal Teams are made up of interagency officers supporting US companies doing business in their markets. “The purpose of the Deal Team Initiative is to support US businesses interested in exporting and investing overseas by identifying opportunities early in the deal cycle and deploying all available US government tools to help US companies successfully compete abroad” (Department of State n.d.).

Table 2. Current Roles and Responsibilities of USG Agencies in Coordinating Quality Infrastructure

| Primary Role | Description | US Agency |
|--|---|--|
| Foreign policy prioritization | Leads foreign policy priorities related to quality infrastructure | Department of State |
| Enabling environment support | Identifies alignment with development priorities and supports capacity-building and other enabling environment implementation | USAID MCC (where appropriate) |
| Project preparation | Facilitates the planning and development of projects to ensure they are well-structured, viable, and ready for implementation | USAID MCC (where appropriate) USTDA DFC |
| Financing and investment climate support | Supports through financing, investment climate enhancement, and institutional reform | DFC Department of the Treasury MCC (where appropriate) |
| Private-sector support | Promotes and supports engagement of the US private sector | Department of Commerce MCC (where appropriate) USTDA EXIM |



Workers survey a biomass site in Kenya

Photo courtesy
USAID

We also recommend that the Strategic Framework propose a process for earlier engagement with bilateral donors and MDBs in the infrastructure project life cycle to determine opportunities to coordinate and streamline infrastructure projects and broader initiatives. Country teams might consider subgroups of intergovernmental actors involved in the planning, funding, and execution of large-scale infrastructure projects. Mission-level information sharing may also include efforts to share potential projects for development, support, and even cofinancing. At the multilateral level, the USG can leverage donor working groups, such as the G20 Infrastructure Working Group (2018), to share early project concepts and plans. The USG Infrastructure Foreign Assistance Project Life Cycle ([Table 1](#)) might be a starting point for the USG to build consensus among G7 partners on clear foreign assistance components of upstream stages within the project life cycle.

3. Develop a Locally Led Quality Infrastructure Agenda

Foreign assistance is most successful when it addresses local infrastructure needs and priorities. We recommend the Strategic Framework call for the development of a locally led infrastructure agenda that identifies where foreign assistance can respond to local demand. USAID has already defined *locally led development* not as a single approach but a “range of ways that USAID, its partners, and communities can work together to shift agenda-setting and decision-making power into the hands of local actors” (USAID 2022). USAID’s extensive work on localization ([Box 10](#)) could be readily applied to infrastructure development. Likewise, the MCC program development process provides a useful model for empowering country-led prioritization and implementation into large-scale infrastructure development ([Box 11](#)).

Ensuring local actors have the technical skills and capacity to implement infrastructure projects is key to a locally led infrastructure agenda. The assessment of need with respect to those skills and capacities should be community-led as opposed to top-down. A locally led approach to quality infrastructure development may require shifting the practice from informing and consulting with local actors about planning during the design and feasibility stage to engaging local actors in real decision-making during the early project preparation stage.

Box 10. Aligning with USAID’s Local Capacity Strengthening Policy

A potential approach could draw from USAID’s Local Capacity Strengthening (LCS) Policy to establish initial principles for capacity strengthening within government agencies, local NGOs, and private firms (USAID 2022). An approach to capacity strengthening that aligns with USAID’s LCS Policy would start with a local-systems perspective that is inclusive of local organizations, governments, individuals, and networks and explores how these actors interrelate. Taking a systems approach may require mapping the direct and indirect sets of stakeholders involved in particular infrastructure developments. When resourcing investments in local capacities, this approach would facilitate local listening and priority setting while building upon existing local knowledge, skills, and relationships.

Other US agencies have developed complementary programs to support capacity development efforts that can also contribute to the localization agenda. For example, the Department of Commerce’s CLDP (Box 4) and USTDA’s GPI (Box 6) provide effective models for demand-driven legal, regulatory, or administrative capacity development. Such efforts could be easily scaled for greater impact.

Box 11. Empowering Country-Led Prioritization and Implementation in Large-Scale Infrastructure Development

MCC’s program development process provides a useful model for empowering country-led prioritization and implementation into large-scale infrastructure development. For MCC programs, country partners choose the sectors where MCC invests based on analyses of the key constraints to economic growth, which is informed by meaningful engagement with citizens, civil society, the private sector, and other donors. Countries then implement the programs through local accountable entities typically known as the Millennium Challenge Account (MCA). The localization agenda could also draw from successful programs in other agencies. For example, the MCA governance structure delegates decision-making and accountability to partner countries. The MCA’s Board of Directors—typically comprised of government officials, local civil society and private sector—is accountable to domestic stakeholders for implementation of MCC-funded programs, transparent decision-making, and achieving results.

4. Integrate Quality Infrastructure Tools into the Foreign Assistance Program Cycle

Foreign assistance could more effectively support quality infrastructure development if the myriad existing tools that support different aspects of infrastructure development were more readily identified and available to foreign assistance professionals. We recommend that the Strategic Framework, led by the National Security Council, develop interagency implementation guidance that identifies the quality infrastructure needs across all agencies and indicates how to access appropriate tools needed for each stage of the proposed US Government Infrastructure Foreign Assistance Project Life Cycle (Table 1) and for all infrastructure sectors. Although there have been efforts within and outside the USG to improve this integration of tools—such as the USAID toolkit described in Box 7—there remains a need to provide access to a more comprehensive set of tools for quality infrastructure development. These tools should be available to all development practitioners, regardless of whether or not they specialize in infrastructure development.

The categorization of tools by life cycle stage would make them broadly available to professionals with a wide range of needs and backgrounds. For example, for the enabling environment and early project preparation stage, the guidance document could direct users—whether democracy officers, engineers, or Treasury attachés—to USG anticorruption tools that specifically target the infrastructure sector. Similarly, the guidance document could provide

a USAID health officer in, for example, Indonesia with access to the right tools for each stage of the health infrastructure development process, from the earliest planning steps to implementation, monitoring, and evaluation.

With the Strategic Framework providing overarching guidance, agencies may consider specialized guidance integrating quality infrastructure into project planning. For example, [USAID's Program Cycle Toolkit](#) and project design phase tools could offer a good starting point for sharing the tools across sectors and program cycle stages.¹⁵ The proposed guidance document may also provide information and access to tools developed outside of USG, although some may need to be adapted to USG requirements and needs.

5. Harmonize and Integrate Project Preparation Activities

Project preparation assistance—a valuable element of foreign assistance for quality infrastructure development—could play a more central role if better coordinated among donors. To enhance the USG's efforts in project preparation, we recommend that the Strategic Framework lay out a process for identifying, harmonizing, and prioritizing project preparation activities to minimize bottlenecks and redundancies. As an initial step, the Strategic Framework should direct the development of a comprehensive list of foreign assistance-funded project preparation activities across federal agencies, categorized using the US Government Foreign Assistance Infrastructure Project Life Cycle. This process, building upon the initial mapping exercise conducted as a part of this review, could begin by soliciting information from each agency regarding all project preparation programs and facilities that they use. Input would also be sought on best practices and challenges of individual programs. Based on this landscape analysis, an interagency policy subcommittee could develop working guidance on common objectives, requirements, and standards for project preparation. This landscape analysis could assist the USG in identifying gaps in project preparation coverage, consistency in objectives, and overlapping and onerous demands on partners. Providing a government-wide mandate and specific objectives on project preparation would facilitate agencies coming together to refine their programs and mechanisms in support of those objectives. Adjustments could then be made to streamline and harmonize programs and requirements to ensure compliance while also reducing unnecessary burdens on partners.

The guidance document could also map out how upstream project preparation activities should be linked directly to downstream, project-level PPFs, and vice versa. At the agency level, the analysis could also help with project preparation prioritization. For example, the landscape analysis could assist USAID target its upstream project assistance on specific training that would better prepare applicants for identified needs later in the project cycle. Likewise, USTDA and DFC staff could use the guidance to advocate for more resources to support project preparation, including bolstering in-country work supporting preparation programs. The guidance would also create a feedback loop to better understand where upstream USG support for project preparation has mitigated risk and encouraged financing in later stages. The landscape analysis could be useful when making important trade-off decisions regarding which project preparation activities are most appropriate for a given context

¹⁵ USAID's Program Cycle Toolkit (as part of the Automated Directives System [ADS 201]) is the agency's operational model for planning, delivering, assessing, and adapting development programming (USAID 2021b).

and where interventions need to be prioritized. It could also serve as a useful starting point for future assessments of the impact and viability of those preparation facilities that receive foreign assistance.

LOOKING AHEAD

The USG's commitment to narrowing the quality infrastructure implementation and financing gap is clear. The opportunity to play a leading role around the world is significant and timely. A Strategic Framework for the Advancement of Quality Infrastructure could provide a roadmap for how foreign assistance could more effectively support quality infrastructure during its early stages of development.

Addressing the quality infrastructure gap requires a well-thought-out, highly coordinated, and carefully balanced portfolio of activities at each stage along the infrastructure project life cycle—from early planning and preparation to implementation and decommissioning. With the five recommendations outlined in this brief, the USG could better communicate the value of quality infrastructure and how these investments can meet country needs, target USG resources for greatest impact, and catalyze US agencies to work together to help low- and middle-income partners implement high-quality infrastructure. Creating a Strategic Framework and implementation guidance are tangible steps that the USG can take to further geopolitical objectives while also aligning behind partners' growth and development. US agencies working together to develop a more effective and efficient approach to quality infrastructure is just the beginning of addressing the limitations identified in this review. Fully addressing the quality infrastructure gap will require long-term change and sustained US leadership.

Given the immense demand, there is an urgency to fund quality infrastructure projects. Yet their proper development takes time, because high-quality infrastructure projects are long-term investments. USG must practice strategic patience in maintaining a long-term perspective. This patience must transcend political cycles to the extent possible. A strong enabling environment can be a key differentiator between countries that successfully scale up quality infrastructure and those that face challenges in doing so (Global Infrastructure Hub 2019). While planning for an Integrated Country Strategy or Country Development and Coordination Strategy, foreign assistance professionals should broaden the conversation with local partners from “What is bankable?” to “Where can we plant seeds of bankability for 5–10 years from now?”

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APPENDIX A. KEY TERMS

| Term | Definition |
|----------------------------|--|
| Bankability | Project readiness for financing through precise investments in the enabling environment and local capacity, often considered difficult in developing country contexts. |
| Capacity development | Approaches, strategies, or methodologies and their stakeholders to change, transform, and improve performance at the individual, organizational, sector, or broader system level. |
| Infrastructure life cycle | Interrelated phases of infrastructure development, starting from early-stage efforts such as planning and prioritization, to mid-stage efforts like design and procurement, and ultimately to construction, operation, and maintenance, and decommissioning or repurposing. |
| Program cycle | The Program Cycle is USAID's operational model for planning, delivering, assessing, and adapting development programming in a given region or country to achieve effective and sustainable results and advance US foreign policy. |
| Project preparation | The Global Infrastructure Hub defines <i>project preparation</i> as early-stage activities within the infrastructure project development cycle required to create a conducive environment to prepare sustainable, bankable, and procurement-ready infrastructure projects (Global Infrastructure Hub 2019). |
| Technical assistance | The provision of goods or services to developing countries recipients in direct support of a development objective, as opposed to the internal management of the foreign assistance program. |
| Upstream versus downstream | <i>Upstream</i> in this report is defined as activities or interventions that are taking place in the first stage of the US Government Foreign Assistance and Infrastructure Project Life Cycle, enabling environment and early project preparation. In other words, upstream interventions are those that are targeted towards improving the enabling environment for infrastructure with a focus on the investment environment, regulatory and policy frameworks, and governance. <i>Downstream</i> in this report is defined as activities or interventions occurring in the later stages when a project is approaching completion of the project design, feasibility studies, and financial project close. |

APPENDIX B. ACRONYMS AND ABBREVIATIONS

| Acronyms and Abbreviations | Definitions |
|----------------------------|--|
| ATLAS | Advancing Transport and Logistics Accessibility |
| BDN | Blue Dot Network |
| BUILD Act | The Better Utilization of Investments to Development Act of 2018 |
| CLDP | Commercial Law Development Program (US Department of Commerce) |
| DEC | Development Experience Clearinghouse (USAID) |
| DFC | US International Development Finance Corporation |
| EXIM | Export-Import Bank of the United States |
| GIF | Global Infrastructure Facility |
| GPI | Global Procurement Initiative (USTDA) |
| ITAN | Infrastructure Transaction Assistance Network (US Department of State) |
| MCC | Millennium Challenge Corporation |
| MDBs | Multilateral development banks |
| OECD | Organization for Economic Co-operation and Development |
| PGI | Partnership for Global Infrastructure and Investment |
| PPFs | Project preparation facilities |
| PPPs | Public private partnerships |
| QII (Principles) | Quality Infrastructure Investment |
| TAF | Transaction Advisory Fund (within ITAN) |
| USAID | US Agency for International Development |
| USG | United States government |
| USTDA | US Trade and Development Agency |

APPENDIX C. METHODOLOGY

The core review team—comprised of representatives from the State Department, USAID, and Duke University’s Nicholas Institute for Energy, Environment & Sustainability—developed the lessons learned and roadmap recommendations using data collected through a review of US foreign assistance projects focused on renewable energy, key informant interviews (KIIs), as well as extensive literature review. The larger interagency task force contributed to the development of the lessons and recommendations through small-group discussions, as well as providing feedback and insights during consultations sessions on draft versions of the report.

US Government Foreign Assistance Evaluation Review

To assess the success of US foreign assistance programs promoting sustainable infrastructure development, we conducted a review of evaluations of US foreign assistance investments in programs and projects related to renewable energy development with a stated intent of mobilizing private sector investment. We selected the renewable energy sector because this sector is a current priority focus of USG infrastructure investments in programs such as PGI and the Just Energy Transition Partnership. Additionally, focusing on a single sector provided the benefit of being more comprehensive: we could exhaustively review every renewable energy project and program funded by the target agencies within the timeframe allocated for this review, and we could complement the US agency mapping exercise by classifying the US interventions in the renewable energy sector across the new US Government Foreign Assistance Infrastructure Life Cycle.

To identify renewable energy–related foreign assistance programs and projects, we queried three catalogs for program evaluations: USAID’s DEC, MCC’s [Evidence Platform](#), and the US Department of State’s internal evaluation registry. Evaluations not available via the Department of State’s internal system nor publicly accessible were not included in the review.¹⁶ Evaluations could take the form of midterm or final project or program reports, evaluations, or special evaluations. The query for projects and programs was limited to the years 2010 through 2023, the year in which this analysis was conducted. An initial 288 evaluations were identified across the DEC, MCC, and State Department registries. The DEC catalog serves as an example of the terms searched:¹⁷

¹⁶ Some agencies such as the DFC and USTDA do not keep catalogs similar to the DEC and do not have publicly available evaluations for review. Thus, if not provided by the agency during consultations, such projects were not included in the analysis.

¹⁷ Similar terms were used for MCC’s Evidence Platform and the Department of State internal registry, though the exact query terms vary according to the search system for each agency.

DEC Search Terms

Searched everywhere for '(Documents.Date_of_Publication_Freeform:

((2000) OR (2001) OR (2002) OR (2003) OR (2004) OR (2005) OR (2006) OR (2007) OR (2008) OR (2009) OR (2010) OR (2011) OR (2012) OR (2013) OR (2014) OR (2015) OR (2016) OR (2017) OR (2018) OR (2019) OR (2020) OR (2021) OR (2022) OR (2023)))

AND (Documents.Class=("Renewable energy resources" OR "Energy resource development" OR "Alternative energy technology"))

AND (Documents.Language_of_Text=("English"))

AND (Documents.Bibtype_Name=("Other USAID Supported Study/Document" OR "Special Evaluation" OR "Other USAID Evaluation" OR "Final Evaluation Report" OR "Evaluation Summary" OR "Assessment" OR "Annual Report"))).

Of the initial 288 documents, 14 evaluations fulfilled the core criteria of (1) being conducted by a third party (i.e., external to the USG), (2) focused on renewable energy infrastructure, and (3) project(s) with a stated intent of mobilizing private sector capital.¹⁸ [Table C.1](#) provides the high-level categorization with examples derived from the third-party evaluations. We have also included supporting examples in the footnotes throughout this review.

The review used NVivo Qualitative Analysis software to code the 14 project evaluations to categorize commonalities and trends related to shortcomings, successes, and recommendations in US foreign assistance relevant to mobilizing private-sector capital in the renewable energy infrastructure sector. Three separate codebooks were created and applied to analyze the evaluations: the USG Infrastructure Project Life Cycle, the text type,¹⁹ and “features of interest.” Coding was done manually except for three of the features of interest, summarized in the table that follows.

The evaluation review helped generate the initial classification of lessons learned and recommendations from renewable energy–related foreign assistance programs and projects since 2010.

Key Informant Interviews

The core review team conducted a series of KIIs to identify and examine lessons and recommendations. The KIIs were divided into external stakeholders and USG representatives. External stakeholders included representatives of multilateral development institutions, think tanks and research organizations, partner governments (donor and borrower), and the private sector. (A list of organizations follows.) Interviews were conducted in an in-person roundtable and through one-on-one virtual interviews. Each session generally followed a script starting from broad queries into challenges of mobilizing private capital for quality infrastructure investments and successes and challenges of related foreign assistance, followed by specific questions related to challenges identified from the evaluation review and other KIIs. In total, more than 75 were interviewed from 16 agencies and external organizations.

¹⁸ This number represents discrete programs or projects, as the 288 documents from the initial search included duplicative information (i.e., a final evaluation for a project in both English and Spanish).

¹⁹ Text type categories were project purpose (stated intent of the project), challenges (mentions of barriers a program faced in achieving outcomes), positive interventions (what aspects of the program or design were thought to have a positive impact, could also be unintentional successes), noteworthy (other interesting findings or mentions that were not necessarily challenges nor positives), and recommendations (such as interventions that do not exist, interventions that should be continued, and interventions that should be discontinued or significantly amended).

**Table C.1. Summary of Third-Party Evaluations of
USG Programs in the Energy Sector**

| Title | Year | Program | Institution | Region/Country |
|---|------|---|-------------|----------------|
| <i>USAID/Mexico Municipal Development Through Infrastructure Financing Activity: A Performance Evaluation</i> | 2013 | Municipal Development Through Infrastructure | USAID | Mexico |
| <i>Assessment of Project Preparation Facilities: Power Africa Transactions and Reforms Program</i> | 2016 | Power Africa Transactions and Reforms Program | USAID | Africa |
| <i>Renewable Energy and Energy Efficiency Project (REEEP) in Nigeria: Final Performance Evaluation</i> | 2018 | REEEP | USAID | Nigeria |
| <i>Evaluation of the REPOWER Activity and Energy Sector Assessment Final Report</i> | 2018 | REPOWER | USAID | Kosovo |
| <i>Performance Evaluation of USAID/Vietnam Low Emission Energy Program (V-LEEP)</i> | 2018 | V-LEEP | USAID | Vietnam |
| <i>Powering Progress Project: End of Project Evaluation Report</i> | 2018 | Powering Progress | USAID | East Africa |
| <i>SARI/EI [South Asian Regional Initiative for Energy Integration] Phase IV Evaluation: Final Report</i> | 2019 | SARI/EI | USAID | South Asia |
| <i>Evaluation of the Ghana II Power Compact: Baseline Report for the ECG Financial and Operational Turnaround Project and Final Report for the Regulatory Project</i> | 2019 | Ghana II Power Compact | MCC | Ghana |
| <i>MCC Indonesia Procurement Modernization Project Evaluation Final Report</i> | 2020 | Procurement Modernization Project | MCC | Indonesia |
| <i>Evaluation Report for Evaluation Services in Support of the Indonesia Green Prosperity Grant Facility</i> | 2020 | Green Prosperity Grant Facility | MCC | Indonesia |
| <i>Malawi Power Sector Reform Project: Final Endline Performance Evaluation Report</i> | 2020 | Power Reform Project, Malawi Compact | MCC | Malawi |
| <i>Malawi Infrastructure Development Project (IDP) Performance Evaluation: Final Endline Report</i> | 2020 | IDP, Malawi Compact | MCC | Malawi |
| <i>USAID/India Greening the Grid (GTG) Project—Final Performance Evaluation</i> | 2021 | GTG | USAID | India |
| <i>Indonesia Clean Energy Development Project (ICED) II Mid Term Evaluation: Final Evaluation Report</i> | 2022 | ICED II | USAID | Indonesia |

Table C.2. Summary of Features of Interest in Codebook

| Name | Description | Files | References |
|---------------------------|--|-------|------------|
| Adaptation or flexibility | Mentions of adaptation or flexibility. | 1 | 2 |
| Coordination | Coordination issues between agencies, donors, and so on. Could also be examples of where coordination has worked. | 11 | 60 |
| Demand or supply | Any mention of supply or demand relevant to infrastructure programming or needs. | 10 | 34 |
| Digital | Mention of digital capability, investment, or activity. | 5 | 10 |
| Gender | Mention of gender inclusivity in design or outcome or gender equity. | 4 | 10 |
| Localization | Localization can pertain to local currency, local ownership, and others. | 5 | 15 |
| Needs assessment | An auto-coding of “needs assessment.” | 16 | 636 |
| Plan and planning | An auto-coding of “plan” or “planning.” | 16 | 1,785 |
| Rating system | Standardized tools used to assess infrastructure projects using specific indicators to guide decision-making throughout project life cycles, enabling comparisons, benchmarking progress, and signaling bankability. | 3 | 65 |
| Standards | Mentions relevant to standards generally, or the discussion of BDN, Fast Infra, or others. | 8 | 17 |
| Tools | An auto-coding of “tool” or “tools.” | 13 | 131 |
| USG interagency | Mentions of cooperation or collaboration across multiple (two or more) US agencies. | 7 | 16 |

Nkula Power Station is the first major hydropower station in Malawi

Photo courtesy Power Africa



by specific questions related to challenges identified from the evaluation review and other KIIs. In total, more than 75 were interviewed from 16 agencies and external organizations.

The second set of KIIs were held with USG staff. These interviews were conducted individually and in small group settings, mostly online. Interviews were held with individuals from all of the agencies represented in the interagency task force plus the Department of Transportation. For the interviews with individuals working at agency headquarters, we used a KII script that followed a similar approach as that used with external stakeholders. We also held a series of KII interviews with USG staff currently or recently working on infrastructure-related foreign assistance or investment development in Kenya and Indonesia. The script for these KIIs focused more on ground-truthing the draft lessons and recommendations that were developed in the earlier stages of the review. Examples of findings from the KIIs are included in footnotes throughout the text as well as in several text boxes from case study examples from Kenya and Indonesia.

The authors also consulted organizations outside the USG ranging from financial organizations to government departments to NGOs. The groups include:

1. Bechtel
2. BlackRock
3. Center for Global Development
4. Center for Strategic and International Studies
5. Citibank
6. Embassy of Australia—International Development Policy
7. Embassy of Canada
8. Embassy of Indonesia
9. Embassy of Japan
10. Embassy of United Kingdom
11. German Agency for International Cooperation, Germany
12. Global Infrastructure Hub
13. Indonesia Australia Partnership for Infrastructure
14. Inter-American Development Bank
15. International Finance Corporation
16. Japan Bank for International Cooperation
17. Morgan Green Advisory
18. Observatory for Sustainable Infrastructure
19. Organisation for Economic Co-operation and Development
20. Private Infrastructure Development Group
21. AfricaGlobal Schaffer
22. Sinfranova (consultant)
23. The Green Guarantee Company.
24. United Nations Department of Economic and Social Affairs
25. United Nations Environment Programme
26. United Nations Office for Project Services
27. World Bank—PPIAF and QII Partnership & Infrastructure Finance and Guarantees

APPENDIX D. GOOD PRACTICES ACROSS THE PROJECT LIFE CYCLE

| Agency | Practice |
|-----------------------------------|---|
| The Department of Commerce's CLDP | Works upstream to create an enabling environment for the successful tendering of infrastructure projects and ultimately lays the necessary groundwork to attract financing of infrastructure and increased private-sector engagement. This includes work to improve the legal and regulatory environment, with a major focus on PPPs and procurement. CLDP's work is almost entirely demand-driven, with opportunities identified through communication between CLDP staff and posts/embassies or bilateral strategic partners. |
| The Department of State's ITAN | Created in 2018 as a part of the Indo-Pacific Strategy to improve interagency coordination on infrastructure. Within ITAN, the TAF, comanaged by USAID, provides legal and consultation services to fill in gaps where one USG agency's mandate ends and another begins. Other models for interagency cooperation at the project level are being piloted at the regional level, including the PGI-IPEF Investment Accelerator for developing Indo-Pacific partners. |
| MCC | The one USG agency that is solely focused on working across the entirety of the infrastructure life cycle. Jointly with its country partners, MCC identifies, designs, finances, and implements infrastructure investments that address binding constraints to private-sector investment in pursuit of its mission of poverty reduction through economic growth. MCC incentivizes an improved enabling environment through its country scorecard approach to selecting partners, and its Threshold Programs directly address policy and institutional reforms. MCC funds extensive due diligence and feasibility studies, which must include stakeholder engagement. Finally, MCC oversees the implementation of its large-dollar Compacts that are implemented by a local accountable entity established by the country partner government. Since its founding in 2004, MCC has invested nearly \$17 billion in grant capital in nearly 50 countries with about 92% of its portfolio in support of the United Nations Sustainable Development Goal 9 (infrastructure). |
| Power Africa | Successfully accelerated the pipeline of quality infrastructure through its integrated focus on all stages of the infrastructure project life cycle. This USG-led partnership between the private sector, international development organizations, and governments aims to mobilize resources for universal energy access within Sub-Saharan Africa. The project has led to 168 million new energy beneficiaries across the region since 2013, more than 11,000 MW of new generation to financial close, and more than \$200 million in mobilized private capital in 2022 alone. A key factor contributing to the program's success is that the Power Africa lead, housed within USAID, was given the clear authority and high-level support to coordinate activities across 12 participating USG agencies. The program developed clear and distinct roles and responsibilities for each agency, focusing on the tasks where each had a comparative advantage. Much of Power Africa's success can be attributed to its "on-the-ground" staffing structure. In addition to its Washington, DC, office, Power Africa has a field office with interagency teams oriented around transactions. The teams focus on building relations with the private sector, other donors, and across USG agencies. Power Africa also has transaction advisors based within USAID missions across Africa. Power Africa also funds liaison positions for staff who split their time between the coordinator's office and the other agencies, such as the Department of Commerce, helping those agencies expand their ability to support Power Africa activities. Because the estimated 300 people who work full- or part-time on Power Africa are mostly based in Africa, they can identify and address local needs, priorities, and capacity gaps. |
| The USTDA's GPI | Works directly with government officials in its partner markets to improve public procurement systems by focusing on achieving greater value-for-money for public investments. With government spending accounting for up to 20% of gross domestic product in many emerging markets, sound procurement practices become vital to ensuring the cost-effectiveness of public spending and the overall success of project implementation. The GPI trains procurement officials on how to fairly and transparently use tools such as life-cycle cost analysis and total cost of ownership to look beyond the initial purchase price and consider comprehensive service, maintenance agreements, and other factors to achieve the best outcome for an investment. By helping partner countries use value-based procurement practices, it levels the playing field for public tenders and, consequently, promotes more inclusive and competitive international procurements that encourage firms to offer innovative, higher-value goods and services. |

APPENDIX E. AGENCY ROLES AND RESPONSIBILITIES

| Agency | Roles and Responsibilities |
|----------------------------|--|
| Department of Commerce | Supports policy by promoting US solutions and strengthens the competitiveness of US companies in international markets |
| Department of State | Leads USG investments in quality infrastructure by setting the overarching foreign policy objectives and directing diplomatic and foreign assistance implementation. |
| Department of the Treasury | Supports overarching policy through promoting transparent, coherent, and comprehensive processes that support increased investment and financing of infrastructure projects and appropriate risk-sharing between private and public partners. |
| DFC | Supports development impact and foreign policy goals on infrastructure by providing financing and political risk insurance to promote private capital mobilization in emerging markets and developing countries. |
| EXIM | Assists in the financing of US goods and services to international markets. |
| MCC | Forms partnerships with developing countries that are committed to good governance, economic freedom, and investing in their citizens to provide time-limited grants largely focused on infrastructure and related policy and institutional reforms. |
| USAID | Provides targeted grants, program support, and risk mitigation to strengthen the enabling environment and local capacity by advancing strategic development objectives across a range of industry sectors. Additionally, the agency supports project preparation through initiatives such as the TAF, Power Africa, Prosper Africa, and so on. |
| USTDA | Funds feasibility studies, technical assistance, and pilot projects that integrate the innovation and expertise of American companies. |

