9 December 2019



Tenth session of the Assembly Abu Dhabi, 11 – 12 January 2020

Report of the Chair of the Advisory Committee The Seventh Cycle of the IRENA/ADFD Project Facility

Summary

In 2009, as part of the bid to host IRENA headquarters in the United Arab Emirates, the Abu Dhabi Fund for Development (ADFD) committed USD 350 million in concessional loans of co-financing over seven annual cycles, for the implementation of renewable energy projects, recommended by IRENA, in eligible developing countries. The IRENA/ADFD Project Facility (Facility) is the result of this commitment. The Facility represents a partnership between IRENA and ADFD. IRENA facilitates an independent selection process of viable renewable energy projects that contribute to sustainable development in developing countries. The operations of the Facility are guided by the "General Principles" (A/4/13), which were approved by the Assembly at its fourth session (A/4/DC/4).

IRENA's recommendation process has been completed for the seven cycles of the Facility. The seventh cycle projects were recommended to ADFD at the end of September 2019. ADFD will make their final selection at the end of December 2019. The selected seventh cycle projects will be announced during the tenth session of the IRENA Assembly in January 2020.

This report covers the work of the Committee during the seventh cycle of the Facility. It describes the implementation of the selection process in the seventh cycle in which fifteen projects were recommended to the ADFD for funding. The recommended projects aim at improving energy access, energy security and livelihoods, and at the same time are replicable, transformative and sustainable. The projects represent over 130 megawatts of new installed capacity with total project costs of USD 469.56 million – seeking USD 182.54 million in loans from the ADFD and over USD 287.02 million in co-financing from other sources. Ensuring the projects have a government guarantee has been an underlying principle guiding the selection process to meet ADFD requirements.

The original design of the Facility was based on an estimate that ADFD would be able to allocate around USD 50 million annually, with ADFD selecting four to five projects per year from IRENA's recommended list. In this seventh cycle, there are more projects recommended to ADFD than in previous years possibly allowing for a full utilisation of uncommitted funds following the sixth cycle.

The report describes continuing improvements made to the selection process, progress on the selected projects and closer engagement with ADFD on following up with projects after they are selected. Given the success of the Facility to date with projects being delivered through the ADFD's facilitation of concessional financing, this report highlights potential initiatives that could be considered in building on the Facility in the future. It also reports on lessons learnt across the projects selected in all cycles and the benefits of engagement with other funds.

I. Background

 Since the inception of the Facility, IRENA has facilitated the evaluation of over 600 renewable energy project proposals from developing countries. The evaluation was carried out by 90 independent global experts¹. The project proposals represent USD 20.7 billion in total project costs which includes USD 5.9 billion requested from ADFD and USD 14.8 billion in co-funding. The year on year demand for the type of funding ADFD offered through the Facility reflects the continuing need for low-cost finance (see Box 1) for renewable energy projects with sustainable development benefits. Annex I presents trends of this demand for funding from cycle to cycle.

Box 1: Summary of ADFD soft loans terms and conditions

Loan size: USD 5 to USD 15 million for each project to cover up to 50% of the project costs.

Loan rates: 1% or 2% depending on which part of the OECD DAC list of ODA recipients the country is on.

Tenure: 20-year loan period including a 5-year grace period.

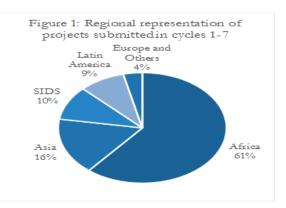
- 2. Technical, economic and, most importantly, sustainable development aspects are evaluated and scored at both an executive project summary (concept stage) and, if shortlisted, at a full proposal (full feasibility study) stage of the online selection process.
- 3. The evaluation rubric that IRENA has developed in consultation with the Panel of Experts, the Committee and the ADFD over the seven selection cycles is available online. It can be used by any stakeholder to understand what aspects of projects are crucial to ensure that they are viable and attractive to funders and demonstrate that they will meet a country's sustainable development goals.
- 4. Projects must be implementation-ready. However, ADFD does not require projects to necessarily have a high financial internal rate of return (IRR). More importantly, projects should have a clear economic feasibility, i.e. a high economic internal rate of return (EIRR)², to deliver broader economic and social benefits to the economy. The projects selected through this process all have high sustainable development benefits including improving people's access to energy, energy security, livelihoods while reducing greenhouse gas emissions.
- 5. Online monitoring dashboards have been developed by IRENA to assist the implementation of projects and allow more effective reporting on development impacts.

¹ See Annex 3 for the experts engaged from government bodies, development funds, academia and the private sector in this seventh cycle. ² IRENA and ADFD worked on a full feasibility study set of principles that clarifies what is required in an economic internal rate of return (EIRR)

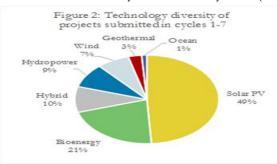
calculation. Download feasibility study requirements at https://www.irena.org/ADFD/Apply/Helpful-Resources.

A review of the Facility over seven cycles

6. Through the seven cycles, projects in Africa accounted for 61% of the submissions. Of the total project proposals, countries in Asia accounted for 16%, 10% from SIDS, 9% from Latin America and 4% from Europe and other countries (see Figure 1). Proposals from Africa and the SIDS have dominated those that have advanced through the process in all cycles, as project sponsors in those regions are better able to obtain a government guarantee to fulfil ADFD requirements.

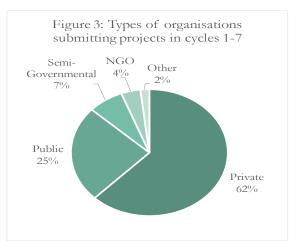


7. Solar PV projects constituted nearly half of all project proposals. These include utility scale solar PV, mini-grid and off-grid projects. Bioenergy projects including the conversion of waste to energy, biomass energy and biodiesel projects accounted for 22% of the project proposals. This is followed by 10% for hybrid (combining wind, solar, hydro and/or biomass),



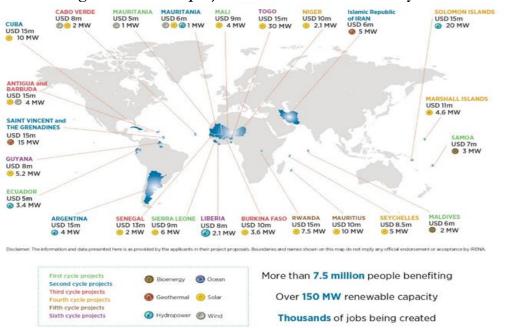
9% for hydropower, 8% for wind, 3% for geothermal and 1% for ocean (see Figure 2). Solar PV dominates the pipeline from project proposal to selection as projects must be at full feasibility study stage and ready to be implemented in line with the ADFD requirements. The project timeline may be slightly longer for bioenergy and other types of projects.

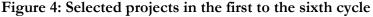
- 8. Figure 3 illustrates that most of the project proposals (62%) are from the private sector, 32% from government and semi-government and the rest from NGOs and other entities. Attracting projects that have government backing and are able to obtain a sovereign government guarantee has been one of the main challenges for the Facility.
- 9. Many countries have stated that International Fund obligations Monetary make it challenging for them to provide this type of guarantee, especially to projects from the private sector. In instances where providing a government guarantee was not possible, IRENA, with the agreement of the project proponents, shared the shortlisted private sector projects with other development funds entities for possible funding. All project proponents are also introduced to IRENA's Sustainable Energy Marketplace to seek other forms of funding.



10. With the completion of the sixth cycle, ADFD had allocated USD 245 million in loans to 24 renewable energy projects that were selected from those recommended by IRENA. Over USD 450 million was to be provided by other co-funding sources to cover the rest of the project costs.

11. The projects are depicted in Figure 4. These include solar PV rooftop programmes, mini-grid solar PV with battery storage, grid-connected solar PV, small scale hydro, mini-grid wind energy, hybrid systems (wind and solar), biomass, waste to energy and geothermal. The projects are aligned with national development priorities, potentially transformative and mainly located in least developed countries (LDCs) or island nations that have limited access to the type of concessional funding that ADFD provides through this Facility.





Details on the progress of the projects selected is presented in section III.

II.Project review and selection during the seventh cycle

- 12. The Advisory Committee has the overarching responsibility to review the shortlisted projects prepared by the Panel of Experts and to select those to be recommended to the ADFD. The Committee has two main roles: one is to carry out the overall project review and selection, and the second is to make suggestions to further improve the effectiveness of the Facility.
- 13. The Committee for the seventh cycle was established at the ninth session of the Assembly in January 2019. It consists of seven members and three alternates reflecting equitable geographic distribution. New Zealand, represented by Mr Mike Allen, Special Envoy for Renewable Energy for the Ministry of Foreign Affairs and Trade, was appointed as Chair of the Committee. The Committee established a Panel of Experts comprising 23 members, to provide technical advice to the Committee. See Annex III on the composition of the Committee members and alternates for the seventh cycle, as well as the Panel of Experts.

Improved outreach

14. Marking a change to and improving the operations of the previous cycles, the online dashboard was opened for applicants to prepare their summary applications well before the period in which applications can be submitted, from 12 November 2018 to 21 February 2019 in the seventh cycle. This provided applicants with more time to familiarise themselves with the online process and to work on and complete their applications.

- 15. In addition to several webinars for applicants, outreach efforts were intensified for the seventh cycle to engage project proponents that are able to obtain a government guarantee. Presentations were made at the May 2018 African Utility Week in South Africa, the International Off-grid Rural Electrification Conference (IOREC) at the end of October 2018 in Singapore and via video conference at other relevant IRENA regional events; the focus was on the online application portal and feedback from experts on the applications made in previous cycles.
- 16. This assisted project proponents in understanding how their projects will be evaluated and on steps for obtaining concessional loans through such a Facility. These sessions were also carried out in conjunction with the presentation of IRENA's Sustainable Energy Marketplace tools and platforms. In addition, targeted outreach initiatives included direct messaging to regional organisations and eligible countries and a social media campaign to government contacts in developing countries. Webinars were also used to target eligible countries.

Selection process

17. By the application deadline of 21 February 2019, 95 applications from 48 eligible developing countries³ were received. This number is more than double the number of public and semi-governmental project proposals received in the previous cycle. As in earlier cycles, private sector submissions represented nearly half of all applications. The total amount of ADFD loans⁴ requested in this current cycle was USD 982 million, with total project costs of USD 3 billion indicating that the demand for this type of funding remains high.



Figure 5: IRENA's evaluation process to recommend projects to ADFD takes seven months

- 18. Solar PV project proposals made up 59% of the submission. The majority of submissions were from Africa. Annex IV presents regional, technology and type of organisation trends represented through the selection process in the seventh cycle.
- 19. Experts evaluated, scored, ranked, provided qualitative technical comments and shortlisted projects through online dashboards until the end of March 2019 and then presented the justification for their shortlisting to the Committee on 4 April via webinar. A total of 62 projects were shortlisted by the Panel of Experts through this process, the highest number at this stage compared to all previous cycles.

³ Eligible countries list can be downloaded from <u>http://www.irena.org/ADFD/Project-Facility/Eligibility</u>

⁴ Details of the ADFD funding offer can be found at <u>http://www.irena.org/ADFD/Project-Facility/Funding-Offer</u>

- 20. From the shortlisted projects, the Committee selected 40 projects via their online dashboards in April and these project proponents were called upon to submit full project proposals. The Committee considered strategic aspects of the proposals, ensuring geographic spread, technology diversity and alignment with government priorities.
- 21. A summary of the comments received from the Panel of Experts evaluating the executive project applications that were shortlisted by the Committee were shared with the project proponents to assist them in improving their full proposals. By the end of June 2019, 31 full project proposals had been submitted. The failure of others to submit full proposals, despite their shortlisting by the Committee, reflected an inability to provide a government guarantee letter and/or readiness of the full feasibility study, both of which are mandatory requirements at this stage. In one case, government prioritisation did not support a second project where two project proposals had been shortlisted in that country.
- 22. The experts evaluated the 31 full project proposals in July and August 2019. Following scoring and ranking by the experts, the Co-Chairs of the Panel of Experts presented their ranked list to the Committee on 3 September 2019.

Recommended projects

- 23. In October 2019, the Committee selected a list of fifteen projects for recommendation to ADFD:
 - The regions represented in the recommended list are Africa, Asia and the Caribbean.
 - The projects range from utility scale solar PV including battery storage to rooftop solar PV, solar public lighting, solar/wind hybrid systems, biogas and biomass and hydropower.
- 24. A total of USD 182.54 million was requested in loans for the recommended projects with USD 287.02 million in co-financing from governments, development funds and the private sector representing total projects costs of USD 469.56 million.
- 25. This is the highest number of projects submitted for recommendation to ADFD and could result in the full utilisation of the available remaining funds of over USD 100 million.
- 26. The ADFD is expected to make its final selection of projects from the list recommended by the Committee by the end of December 2019. The announcement of the selected projects is scheduled to take place at the tenth session of the IRENA Assembly in January 2020.
- 27. Many of the projects that scored well but were unable to obtain a government guarantee may be placed on IRENA's Sustainable Energy Marketplace for alternative sources of funding. IRENA also shares these projects with a list of 197 funding contacts via an online dashboard (see Annex V).

III. Progress of projects post selection

28. The selected projects are at various stages of progress (see Annex II). Of the 24 projects selected in the first to the sixth cycles, ADFD continues to engage with 18 of them to advance them to completion. Twelve of them have signed loan agreements. Eleven signed loan agreements have been declared effective and disbursements have commenced to seven projects. The solar project in Cuba was commissioned in May 2019 and with savings, is now also being expanded (see Box 2). Another project is partially commissioned in the Maldives. Six more are at construction. Six of the projects are no longer expected to be financed by ADFD as they have faced country debt issues and/or a reprioritisation.

29. A summary of the performance of the projects⁵ selected in terms of the status of the ADFD loan agreements, construction and advancement to completion is outlined in the table below. Note that disbursements to projects can only be made after loan agreements are signed, ratified and declared effective.

Status	Number of projects
Projects advancing to completion.	18
Loan agreements signed.	12
Loan agreements ratified and declared effective.	11
Loan agreement status for the rest of the progressing projects:	7
 A loan agreement for a project from the third cycle is yet to be ratified after the agreement was signed in April 2019. Three loan agreements from the fourth cycle and two from the sixth cycle are ready to be signed. 	
• One project from the sixth cycle has not reached the stage where loan agreements are processed.	
Construction and installation ongoing for eight projects in the following countries: Antigua and Barbuda, Cuba, the Maldives, Mali, Mauritania, Seychelles, Sierra Leone and Togo.	8
Disbursements commenced for Antigua and Barbuda, Argentina, Cuba, the Maldives, Mali, Seychelles and Sierra Leone.	7
Electricity generation from (partially commissioned) projects in Cuba and the Maldives.	2
Projects not advancing with ADFD funding. The reason for projects not advancing with ADFD funding includes reprioritisation of the respective parties, challenges providing a sovereign guarantee and country debt issues.	6

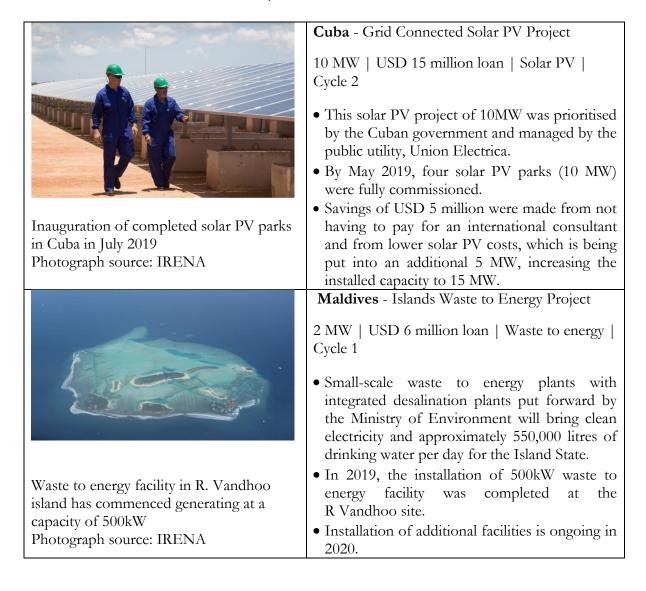
Table 1: Status of projects selected from the first to the sixth cycle

- 30. As per the Guidelines for Applicants available online⁶, if a project is selected for ADFD funding, the loan and guarantee agreements should be signed within a maximum period of two years from the date of the official notification by ADFD of the preliminary approval of the loan. There have been challenges observed in meeting this timeline and in advancing the projects to construction and installation.
- 31. The uniqueness of each project and country-specific contexts are contributing to either enabling or slowing down the rate of progress. In this regard, some of the projects are advancing more quickly whilst others are taking longer to get to implementation. Key attributes that have been observed to contribute to the rate of progress of projects include:
 - the capacity of all stakeholders involved;
 - the country's political and economic factors that influence the ability to meet the sovereign government guarantee and co-financing requirement;
 - the nature of the renewable energy resource (geothermal and hydro takes considerably longer to develop than solar PV, for example); and
 - climate-induced /environmental factors.

⁵ Projects are listed on the IRENA/ADFD website at <u>http://www.irena.org/ADFD/Selected-Projects</u>

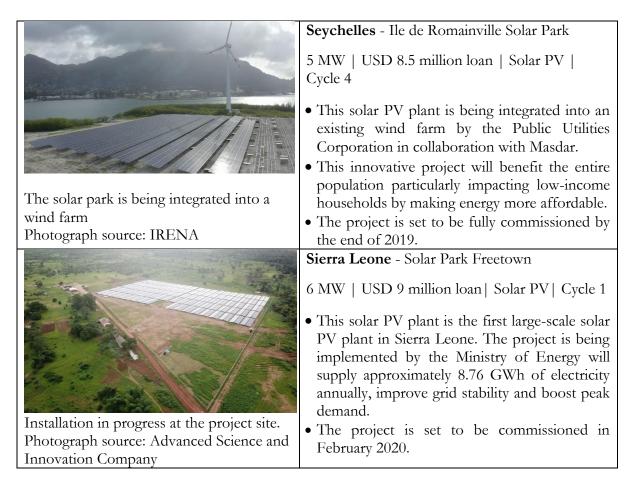
⁶ http://www.irena.org/ADFD/Apply/Helpful-Resources

- 32. Note also that these are government-driven development-focused projects that take longer than private sector projects to deliver.
- 33. IRENA and ADFD teams encourage the project proponents to reduce the delays by completing other stages in parallel to the ratification process of the loan agreement. For example, setting up the Project Implementation Unit and preparation of procurement documentation and seeking no objection on this.
- 34. Progress towards completion of the projects is often delayed compared to the planned implementation schedules. This is attributed to challenges faced by project implementing teams in completing various stages, key among them being: arranging co-financing, procurement of consultants and contractors and loan withdrawal.
- 35. The need to continuously engage with ADFD and project teams is evident several projects have continued to request more regular follow up calls with ADFD. In addition, follow up field monitoring missions have commenced with the aim of validating progress, providing support to project teams on the ground and enabling reporting of progress to the IRENA membership.



Box 2: Projects commissioned in 2019

Projects advancing to completion



IV. Preliminary reflections on the operations of the Facility and future opportunities

Evaluation and monitoring process

- 36. IRENA has administered a transparent evaluation process that takes approximately seven months to recommend projects to the ADFD (see Figure 5). It was noted by the Committee that compared to other development funding sources, this is a short timeline.
- 37. The evaluation process is administered through online dashboards that are effective and low cost. IRENA has also built upon this to develop a monitoring platform to help monitor and track the progress of the projects that have been selected for funding by ADFD.
- 38. The Committee also noted that the two-stage evaluation process provides an opportunity for promising project summaries to be submitted at an early stage of their evolution, and those shortlisted are then given time to submit a fully developed and comprehensive proposal. It is a process that does not raise unpredictable requirements for the project proponents. The process is aligned and tailored according to ADFD requirements i.e. project proponents are informed that contracting processes and tender regulations as per ADFD requirements would need to apply after selection.
- 39. It was further noted that ADFD has worked closely with IRENA to improve the information provided to applicants, particularly for the guidance on feasibility studies. A key attraction of the Facility is that ADFD has offered particularly low interest rates and extended the loan period that applies.

Co-funding

- 40. Co-funding is critical for projects supported by the ADFD through the Facility. Co-funding sources have included the Arab Bank for Economic Development in Africa (BADEA) for the Mali solar PV diesel mini-grid project; the Caribbean Development Bank, Global Environment Facility (GEF) and the Inter-American Development Bank for the geothermal Saint Vincent and the Grenadines project; and under the auspices of the Green Climate Fund, the World Bank and the Asian Development Bank for the Tina River Hydro project in the Solomon Islands.
- 41. All interested development funds are invited to be listed on the Facility website: the Asian Infrastructure Investment Bank, the African Development Bank, United Nations Development Programme (UNDP)-GEF, the Islamic Development Bank are currently listed there⁷. ADFD also shares the projects with the Coordination Group of Arab funds.

Project implementation, timeline and costs

- 42. There are a number of factors impacting project implementation, timeline and costs. These include:
 - delays in progress when there are changes in government during contract negotiations;
 - Multilateral Development Banks borrowing restrictions may influence a country's ability to access ADFD loans;
 - challenges in meeting the ADFD requirement for sovereign guarantees; this requirement is difficult for private sector proponents; and
 - lack of experience on internationally acceptable and ADFD tendering and procurement procedures.

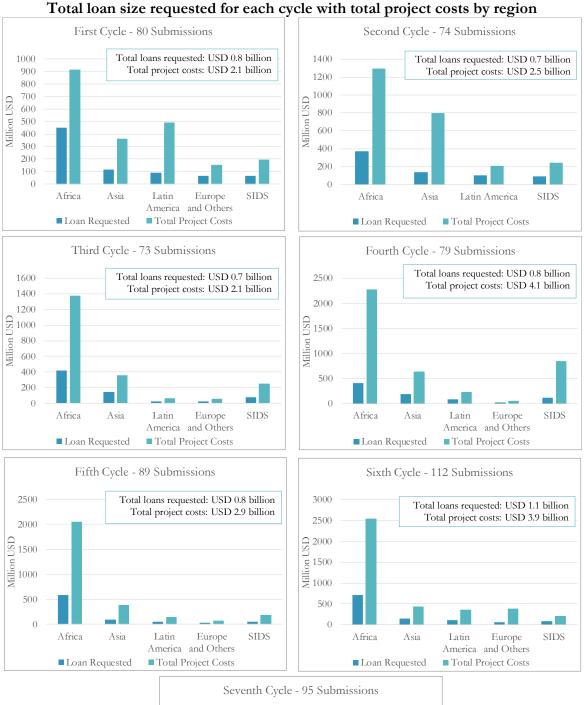
Opportunities in the future

- 43. There has been a clear and valuable learning curve throughout the operations of the IRENA/ADFD Facility. Although administrative issues have impacted on the speed of loan disbursement and project implementation, the Facility has allowed full implementation of a number of projects and others are progressing steadily towards completion.
- 44. While the requirement of a sovereign guarantee has limited the number of eligible projects, those selected to date have been development-focused and of national priority. The modest cycle time from receipt of bids to project selection under the IRENA/ADFD Facility is exemplary in the market.
- 45. IRENA has played the role of attracting, evaluating and recommending projects to ADFD and ensuring ongoing oversight of projects. Despite the potential exhausting of current funding from ADFD, monitoring and implementation will need to continue to help advance projects and to report project impact to IRENA Members, as well as to share lessons learnt with interested parties.
- 46. This should involve onsite appraisals, regular tracking, follow up, monitoring reports and conducting workshops.
- 47. Given that the remaining funding available to the Facility from the ADFD after the sixth cycle may be fully utilised, the results at the seventh cycle will provide the final determination regarding any possible remaining funds and influence the immediate opportunities for the current Facility.

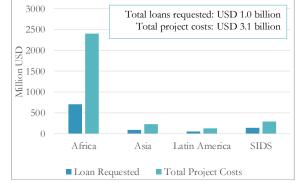
⁷ Co-funders are listed at http://www.irena.org/ADFD/Project-Facility/Funding-Offer

An enhanced Facility

- 48. Given the strong market response to funding support offered to date by the Facility, IRENA needs to move quickly to build on this success and explore ways to continue engagement with the ADFD and other funds on initiatives to maintain this critical window of renewable energy financing.
- 49. One approach, discussed by the Committee at the seventeenth session of the IRENA Council in Abu Dhabi, could see ADFD providing ongoing concessional loans whilst other funding parties provide complementary instruments to cover project preparation, equity, debt, and guarantees needed. ADFD support would underwrite an effective "anchor fund". While IRENA could provide support for the combined Facility, it is suggested that there would be limited appeal to establish a co-mingled single fund, given the likely mixed interests of potential partners and the complexity of structuring that this would entail.
- 50. The proposed enhanced Facility would utilise the low-cost online desk review of projects following the current procedures established within the IRENA/ADFD Facility. This would be strengthened by more in-person engagement with applicants, experts, Committee members and co-funders. Monitoring and reporting on development impact, capturing lessons learnt and activities to showcase success stories to developers would continue. This would be for the benefit of a wider cross section of stakeholders and funders to attract further interest and additional financial support.
- 51. The envisaged enhanced facility could offer an effective and simple platform to share a basket of shortlisted projects with various external funds, each of which may have a specific interest/ability to provide additional financing to enable those projects. These alternative sources could potentially include funding for technical assistance towards feasibility studies and/or bid preparation; loans, grants, equity investment, credit lines, bonds or guarantees for private or public sector projects or programmes.
- 52. Of real value would be particular funding instruments that facilitate private sector investment from various sources, an area that has shown high demand but has not been able to be met by the present Facility due to the government guarantees required under the existing ADFD funding.

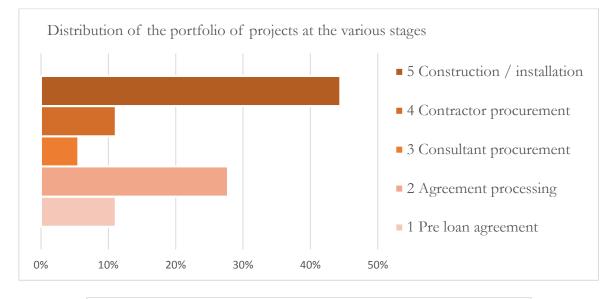


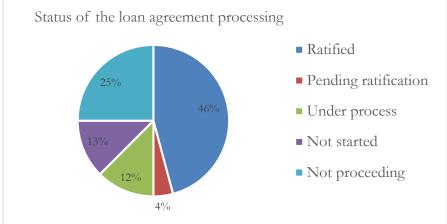




ANNEX II

Progress of the project portfolio (Q3 2019)







ANNEX III

Advisory Committee members and alternates⁸ in the seventh cycle

Members

- Chad
- Ecuador
- France
- Japan
- Kuwait
- New Zealand Chair
- Nigeria

Alternates

- Pakistan*
- The Philippines
- Republic of Korea

*Pakistan served as alternate to Kuwait in the work of the Committee.

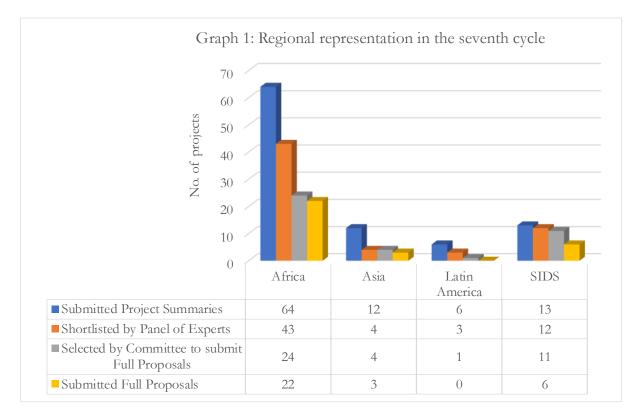
Panel of Experts in the seventh cycle

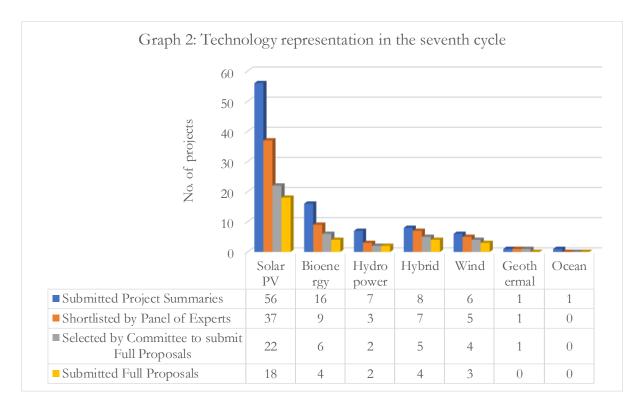
- Djibrine Ngarmig Nig, Ministry of Energy (in Chad) Co-Chair and Lead
- Pamela McKinnon, Emera Inc. (in Canada) Co-Chair and Lead
- Ali Ahmed Ali, Ministry of Electricity and Renewable Energy (in Egypt) Lead
- Christopher Ahlfeldt, Blue Horizon Energy (in South Africa) Lead
- Francis Xavier Ochieng, Institute of Energy and Environmental Technology (in Kenya) Lead
- Karen McClellan, Intelligent Energy (in the United Kingdom) Lead
- Krzysztof Biernat, CSWU Cardinal Stefan Wyszynski University (in Poland) Lead
- Jorge Lascas, African Power Platform (in Kenya) Lead
- Lelo Mdhladhla, POWERX (in South Africa) Lead
- Pandey Gyanesh, Nanyang Technological University (in Singapore) Lead
- Aleksi Lumijarvi, Nordic Development Fund (in Finland)
- Charles Kanyunga, Finealt Engineering (in Zimbabwe)
- Cyril Carabot, French Renewable Energy Industry Association (in France)
- Hussain Mogaibel, Islamic Development Bank (in Saudi Arabia)
- Jan Zeevalkink, AYA Consultancy Independent (in the Netherlands)
- Karim Megherbi, EPDA Services (in the UAE)
- Nefesa Mohamed, New and Renewable Energy Authority (in Egypt)
- Nicola Bugatti, Trama TecnoAmbiental, S.L. (in Spain)
- Nihad Harbas, Ministry of Foreign Trade and Economic Relations (in Bosnia and Herzegovina)
- Niklaus Eggenberger, Swiss Agency for Development and Cooperation (in the Embassy of Switzerland in the UAE)
- Maha Mostafa Awad, RCREEE (in Egypt)
- Martín Scarone, Ministry or Industry, Energy and Mining (in Uruguay)
- Yasushi Ninomiya, The Institute of Energy Economics (in Japan)

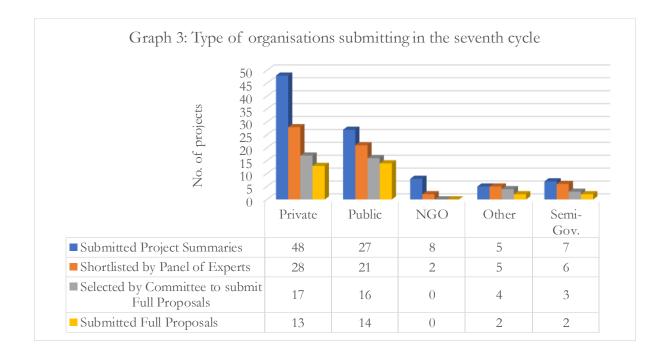
⁸ Countries of Committee members and alternates and Experts on the Panel in previous cycles are listed at <u>http://www.irena.org/ADFD/Project-Facility/Selection-Process</u>

ANNEX IV

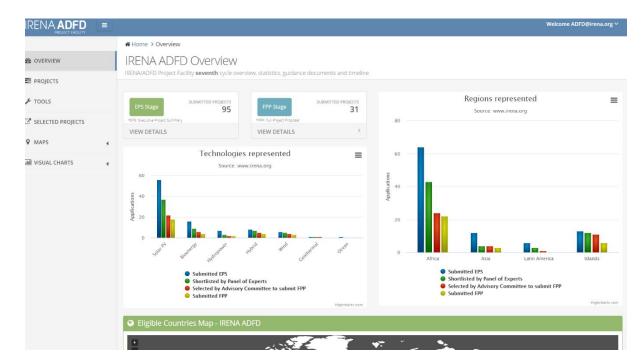
Number of projects by region, technology and type of organisation through the selection process in the seventh cycle







ANNEX V



Online dashboard for interested co-funders