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The EU's Technical Assistance Facility (TAF) for Sustainable Energy

What's new: Field facts and findings

Kazakhstan: Hard-Talk Event on Renewable Energy Policy

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Improving the implementation of Hybrid Power System

The TAF Team is involved in studies and planning for the large scale integration of renewable energy in island and remote power systems.

ElectriFI: Bridging the finance gap between equity and commercial loans for energy projects

The European Commission's Electrification Financing Initiative (ElectriFI) acts as a financing mechanism to support market development and private sector initiatives for affordable, sustainable, and reliable energy solutions in developing countries. The TAF is working on Market assessments for dedicated ElectriFI Country Windows.

What's next: Upcoming missions

ElectriFI Market assessments in Sub-Saharan Africa and Asia

What we do: The EU's Technical Assistance Facility for Sustainable Energy

Focus on: East and Southern Africa

'The EU's Technical Assistance Facility for Sustainable Energy' newsletter covers items of news from all the countries of operation of the EU TAF: East & Southern Africa, West & Central Africa, East & South Neighbourhood, Asia & Central Asia, Latin America, the Caribbean and the Pacific.

If there is a particular topic that you would like to see covered in future newsletters, please write to us. We welcome your feedback!

With our best wishes,

The TAF teams

What's new: Field facts and findings

Kazakhstan: Hard-Talk Event on Renewable Energy Policy

Activity areas: Policy and Reforms

More than 150 stakeholders gathered to discuss barriers to investment in Renewable Energy projects and best practice policies and tools to overcome them, in a two-day event in Astana, Kazakhstan

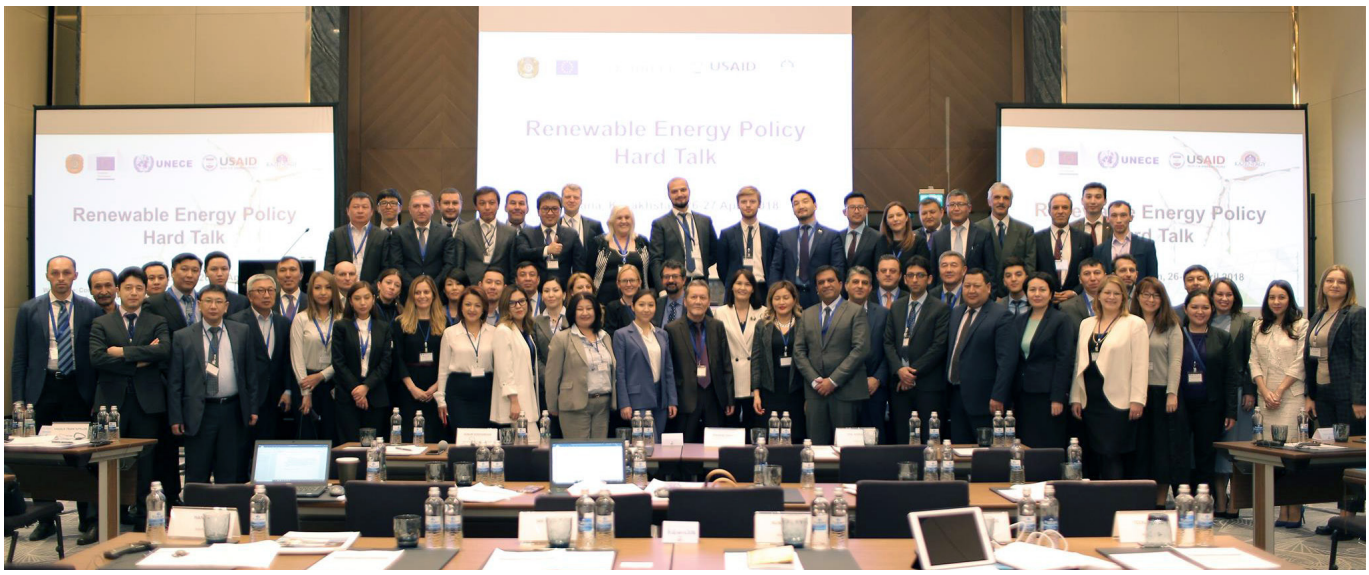
The Renewable Energy Policy Hard Talk event was held in Astana on 26 and 27 April 2018. This high-level policy dialogue on Renewable Energy Investment was organised by the Ministry of Energy of the Republic of Kazakhstan with the support of the European Commission, JSC Kazenergy, USAID and United Nations Economic Commission for Europe (UNECE).

The main goal of the Renewable Energy Policy Hard Talk was to contribute to further foster the deployment of Renewable Energy in Kazakhstan.

Mr. Kanat Bozumbayev, Minister of Energy of Kazakhstan, opened the event and pointed out Kazakhstan's ambitious renewable energy (RE) target to reach 50% of its energy mix by 2050.

In the closure, Mr. Traian Hristea, Head of the European Union Delegation to Kazakhstan welcomed the commitment of the government of Kazakhstan and acknowledged the progress already made in pursuing those targets, a progress also recognised by Donors, independent experts as well as domestic stakeholders, while at the same time accepting the need for targeted interventions in order for those ambitious targets to be reached.

As a result of the dense two-day discussions in six sessions, a Recommendation Paper was prepared, which identified several remaining barriers that are still faced by investors as well as best practice policies and tools to overcome them.



This event, the 4th of this type in the region, gathered a broad range of stakeholders, including policy-makers, public administrations, private developers and investors, financial institutions, donors, experts and civil society representatives, for a total participation of over 150 persons.

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What's new: Field facts and findings

Improving the implementation of Hybrid Power Systems

Activity areas: Capacity building, Project development

The TAF Team is involved in studies and planning for the large scale integration of renewable energy in island and remote power systems.

One challenge of island grids and micro-grids is to maintain the balance between production and consumption. Nowadays, diesel generators are still frequently used for this. Renewable energy is seen as an attractive alternative to progressively alleviate the dependence on the highly volatile and generally increasing fuel prices and the negative environmental impact. Indeed, wind, solar and hydro power are independent of imported fuels and environmentally friendly, and therefore the logical choice for islands and micro-grids.

The main objective of the 3rd International Hybrid Power Systems Workshop which took place in Tenerife, Spain (8 - 9 May, 2018) was to present the current state of the hybrid technologies, the methodology for planning their integration, relevant studies and projects that combine conventional energy (such as diesel), renewable energy (such as wind, solar and hydro) and storage. Innovative, isolated power systems and micro-grids could integrate high shares of renewable energy and combine batteries, flywheels and hydro pumped storage with conventional power generation systems. In this context, one of the key objectives is to develop innovative, cost effective and sustainable hybridization of conventional power generation with renewable energy.

The 3rd International Hybrid Power Systems Workshop took place in Tenerife, Spain from 8 to 9 May 2018. It gathered more than 20 participants, not only from the West and Central African countries but also from the rest of the World for which hybridization is on the energy political agenda.

The participating experts shared their project experiences and noted the good practices and the areas in need of improvement. After discussing about locations and operating environments, with a focus on economics and implementation issues of hybridised systems, they also exposed their latest thinking on the design and operation of several hybrid power systems.

> *"This workshop shared a lot of useful information on hardware and software solutions, equipment and method on how to manage the operation of power system with high penetration of renewable energy."*
>
> *Linh Hoang Nguyen, Ministry of Industry and Trade, Vietnam*

Moreover, the location of the workshop, in Tenerife, offered a good case study as an island with a power system characterised with a relatively high penetration of renewable energy. It provided an interesting example for the operation of an isolated power system with a contribution from variable renewables. By its size and characteristics, the Tenerife power system shares similarities with most West and Central African networks that also rely on diesel to maintain the balance between power generation and consumption.

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What's new: Field facts and findings

ElectriFI: Bridging the finance gap between equity and commercial loans for energy projects

Activity areas: Mobilising funds and partnerships

The European Commission's Electrification Financing Initiative (ElectriFI) acts as a financing mechanism to support market development and private sector initiatives for affordable, sustainable, and reliable energy solutions in developing countries. The TAF is working on Market assessments for dedicated ElectriFI Country Windows.

A major barrier to investments in access to energy in developing countries is the lack of access to seed, mid- and long-term capital. In immature market conditions this is aggravated by the reluctance of commercial banks to provide suitable lending that responds to the needs of investors. Capacity limitations in terms of structuring and bringing projects to financial close exacerbate the situation.

Attracting financing for "unattractive" projects

The Electrification Financing Initiative (ElectriFI) is an impact investment facility set up in 2016 as a joint initiative by EC and EDFI's, funded by EC, Power Africa and Sweden, with purpose to support electrification investments that will lead to new and improved connections, as well as encourage the adoption of renewable energy.

ElectriFI encourages the adoption of renewable energy by providing a flexible financing instrument that invests in high risk renewable energy projects that conventional sources tend to avoid. Support options include TA, junior debt, senior debt, and equity.

The interim financing solutions help projects overcome obstacles, or otherwise reach a sufficiently mature stage that could attract private financiers.

ElectriFI does not compete with other financiers, but seeks collaboration and additionality to other funders.

ElectriFI at a glance:

- Global facility, funded by the European Commission with an initial amount of EUR 105 million
- Geographical Focus: Developing/Emerging Countries - Preference given to rural areas
- Product offering: Corporate and Project Finance
- Product range: Development finance, Debt, Quasi-equity, Equity
- Investment size: EUR 500k to EUR 10 million (local currency equivalent)
- 'Sweet Spot': investment amount between EUR 2 and 6 million
- Investment not to exceed 50% of the project total costs
- Current tenor: max. 10 years
- Pricing: market comparable risk / return expectations (no crowding out, no concessional finance), comparable to DFIs
- No grants

ElectriFI co-finances the implementation of the Asrama Microgrid Pilot Project developed by the energy access integrated operator Benoo Energies. Asrama is a village of 5000 residents in Togo, connected to the national road, with no electricity. The closest grid connection is 27 km away. The financed pilot will have a capacity of 24 kW and will focus on servicing around 80 businesses. The target capacity is 110 kW, aiming at reaching 370 households and 85 businesses.

The purpose of the pilot is to help validate the business and financial assumptions of Benoo (including acceptance of pricing level and support by local authorities), especially related to the micro-grid revenue stream. ElectriFI will provide EUR 100,000 in development financing that will be used to co-finance the implementation of Asrama Microgrid Pilot Project.

If ElectriFI provides more funding to Benoo Energie for the expansion of its activities in West Africa, this development financing will be converted to a first down payment under a larger financing agreement. More info: www.electrifi.eu

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What's new: Field facts and findings

Opening up the Country Window

The ElectriFI 'Country Window' is a modality used to bridge the domestic gaps in structuring and financing of investments in a country, by contributing a portion of the EU's 11th EDF National Indicative Programme funding for the country in question to ElectriFI.

Whether or not a dedicated country window has an added value, depends on the appetite in the private sector to make use of this financing instrument. Different sub-sectors are being assessed in the context of several ongoing assignments of the energy market (like solar home systems, captive power, etc.) if the private sector has investment plans that would be served by an ElectriFI country window, and under which conditions.

Specific in the design of the country window is that it must be additional to other ongoing programs and activities; it should not disturb existing finance market; and it must support the objectives of the Government.

While the international ElectriFI window first and second calls addressed access projects primarily, the upcoming country windows will have a broader scope, ranging from efficient cooking and electricity access to energy efficiency, captive power and productive use.

The process includes a stocktaking mission, where the TAF Teams gather relevant information on the successful initiatives and propose innovative solutions. Market surveys lead to insight in the absorption capacity and potential of the different energy sub-sectors and, if needed, the team provides recommendations to shape a financial instrument using the ElectriFI window model.

The ElectriFI country window is then designed based on the findings, thus allowing for the maximum effect from the ElectriFI funds to be achieved.

To date, TAF missions in support to Market assessments for ElectriFI country windows have been undertaken at Regional Level in the **Caribbean** and the **Pacific** Regions and also in **Thailand**, and **Zambia**. Further TAF assignments in support to Country Windows world-wide are starting now or are planned for Bangladesh, Ghana, Ivory Coast, Kenya, Myanmar, Nigeria, the Philippines, Tanzania and Madagascar.

What's next: Upcoming missions

ElectriFI Market assessments

Africa

In 2016, more than half of Africa's population had access to electricity, up from 45% in 2014, but still leaving more than 600 million without electricity. The overall demand is expected to increase significantly by 5 to 6% per year until 2040. Africa is characterised by vast renewable energy resources available but untapped. The renewable energy potential is estimated up to 1,100 gigawatts (GW) of solar capacity alone in Africa. Therefore, the need, and ways to unlock affordable and clean energy across Africa remains a major concern and a tremendous challenge.

In Ghana, Ivory Coast, Kenya, Nigeria, Tanzania, and Madagascar, TAF teams are scheduled to be mobilised for stocktaking missions, to analyse the existing market potential for renewable energy investments projects and the funding opportunities for private sector investments in renewable energy.

Ghana has small reserves of oil and coal, but very large natural gas resources. The government of Ghana has set a target of 10% generation of energy from renewable energy sources by 2030.

Ivory Coast government wants to increase by 20% their capacity of renewable energy sources by 2030.

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What's next: Upcoming missions

In **Kenya**, energy is one of the key drivers towards achieving its economic blueprint, Vision 2030. The recent hydrology crisis has highlighted the need for the diversification of the sources of power supply. Kenya has become one of the best-served off-grid populations in the world, featuring some of the most advanced pay-as-you-go solar home system companies and innovative business models for mini-grid development.

Madagascar's Vision 2030 foresees that 85% of electricity production will be based on renewable energy.

In **Nigeria**, more than 100 million people live without electricity and the energy generated in this country comes from diesel private generation. The government has set a target of 30% generation of energy from renewable energy sources by 2030.

In **Tanzania**, the Power System Master Plan (PSMP) puts the country on pace for 27% of hydro + renewables by 2040 in its generation capacity.

Asia

The countries eligible for ElectriFI in Asia are Afghanistan, Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Iran, Iraq, Lao People's Dem. Rep., Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Viet Nam.

In Bangladesh, Thailand, Myanmar, and the Philippines, TAF assignments are launched in support to market surveys, viewing to assess the capacity and potential of the respective renewable energy markets.

Bangladesh's Vision 2021 and COP-INDC predict that Bangladesh's renewable generation capacity share will become 10% by 2021.

Though **Myanmar** is one of the five major energy exporters in the Asia Pacific region, electrification within the country is far from complete. The preferred energy scenario shows an energy generation mix of 57% for hydropower, 30% for coal, 8% for natural gas and 5% for solar and wind by 2030.

In the **Philippines**, the Renewable Energy Act provides investors with non-fiscal and fiscal incentives; the law mandates the tripling of installed renewable energy capacity by 2030 to about 15,000 MW.

What we do: The EU's Technical Assistance Facility for Sustainable Energy

Supporting the **#EU's vision** and strategies at national and regional level

Provision of **#high quality** technical assistance at Partner Country and Region

#Low lead times from ToR preparation to assignment launch

Efficient and **#effective management** of each mission

#Control mechanism and QA for coherent deliverables

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What we do: The EU's Technical Assistance Facility for Sustainable Energy

The 'EU's Technical Assistance Facility (TAF) for Sustainable Energy' assists partner countries in fine-tuning their energy policies and regulatory framework that allow for increased investments in the energy sector. The TAF supports countries which are committed to reaching Sustainable Energy objectives, and in particular those who selected energy not only as one of the priority areas of their national policy agenda but also as focal sector in their bilateral cooperation with the EU for the period of 2014-2020.

Through targeted expert missions to the partner countries, five types of technical assistance packages ('Activity Areas') are delivered:

Policy and reforms; Capacity building; Investment projects planning; Mobilising funds and partnerships; Industrial and technology cooperation

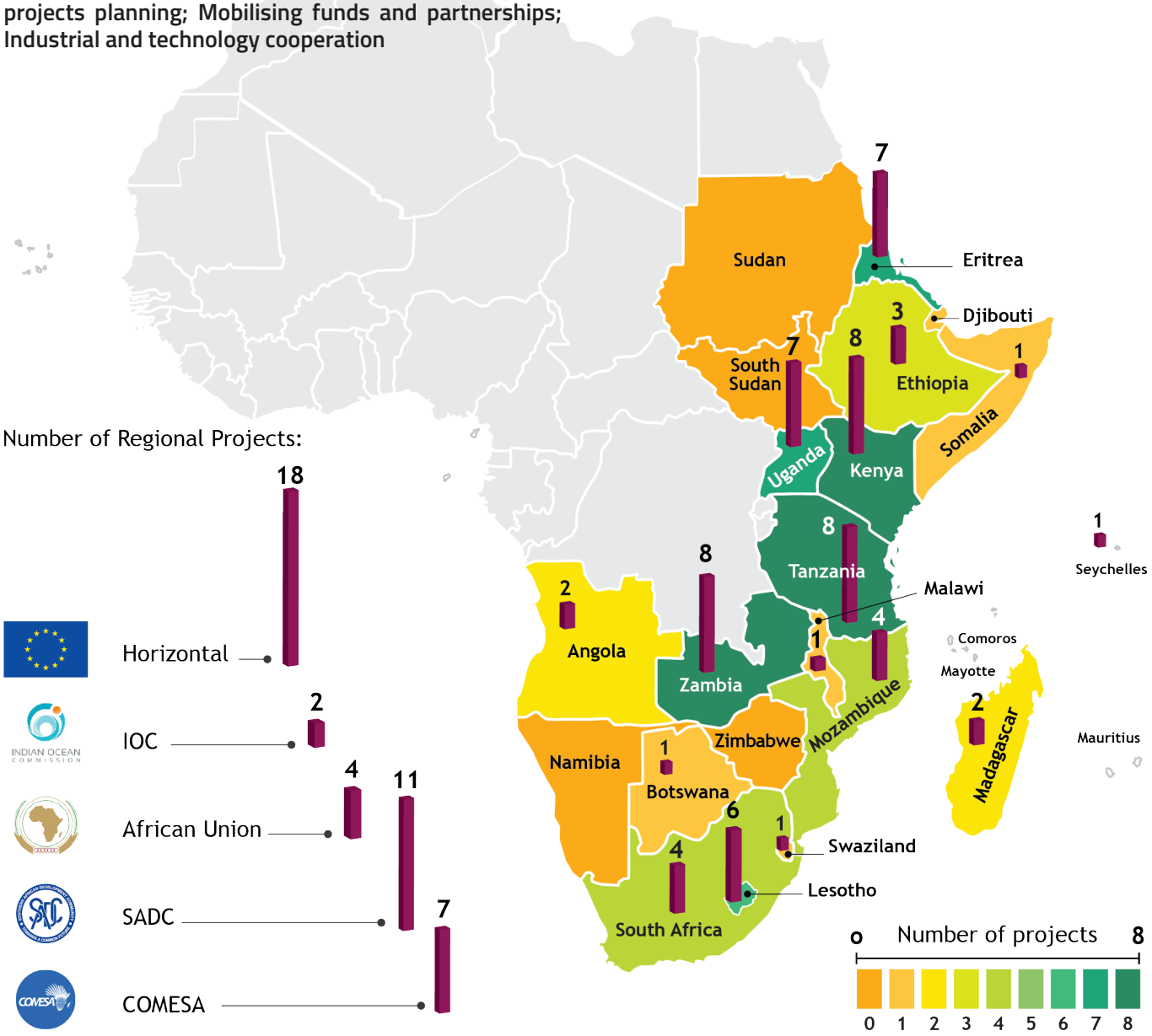
Overview of TAF support:

Since its launch in 2013, the TAF has provided technical assistance for some 240 missions in Sub-Saharan Africa.

A year after the Sub-Saharan Africa TAF launch, TAF operations were extended to also accommodate regions beyond Sub-Saharan Africa, and to date over 40 technical teams have been deployed by the TAF 'Rest of the World' Facility – ranging from the East and South Neighbourhood to Asia, Latin America, the Caribbean, and the Pacific.

Focus on:

East and Southern Africa



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