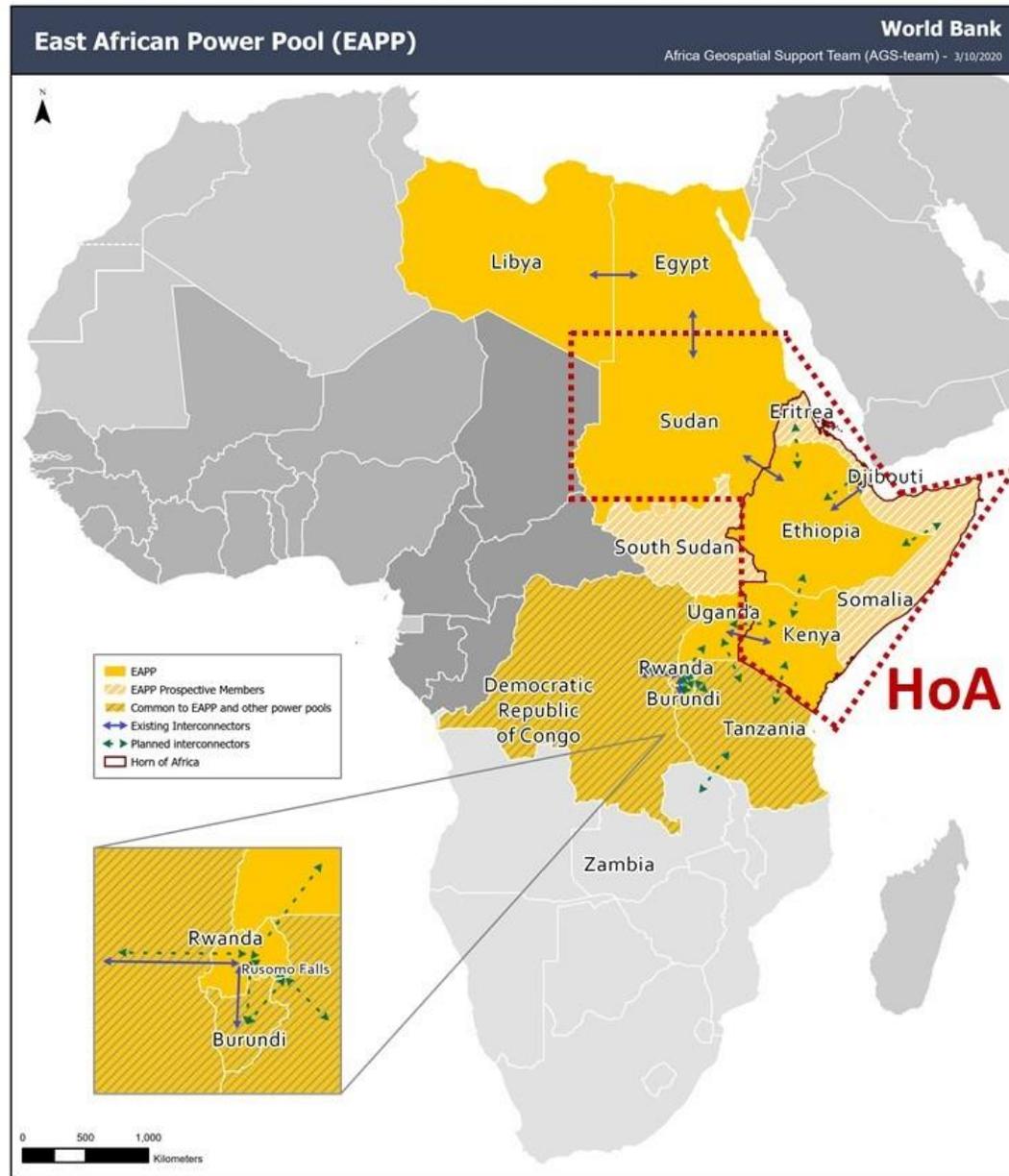


Outcome of Virtual Energy Technical Workshop held on March 30

MARCH 31, 2020

Diverse systems in EAPP and HoA create a strong rationale for regional integration

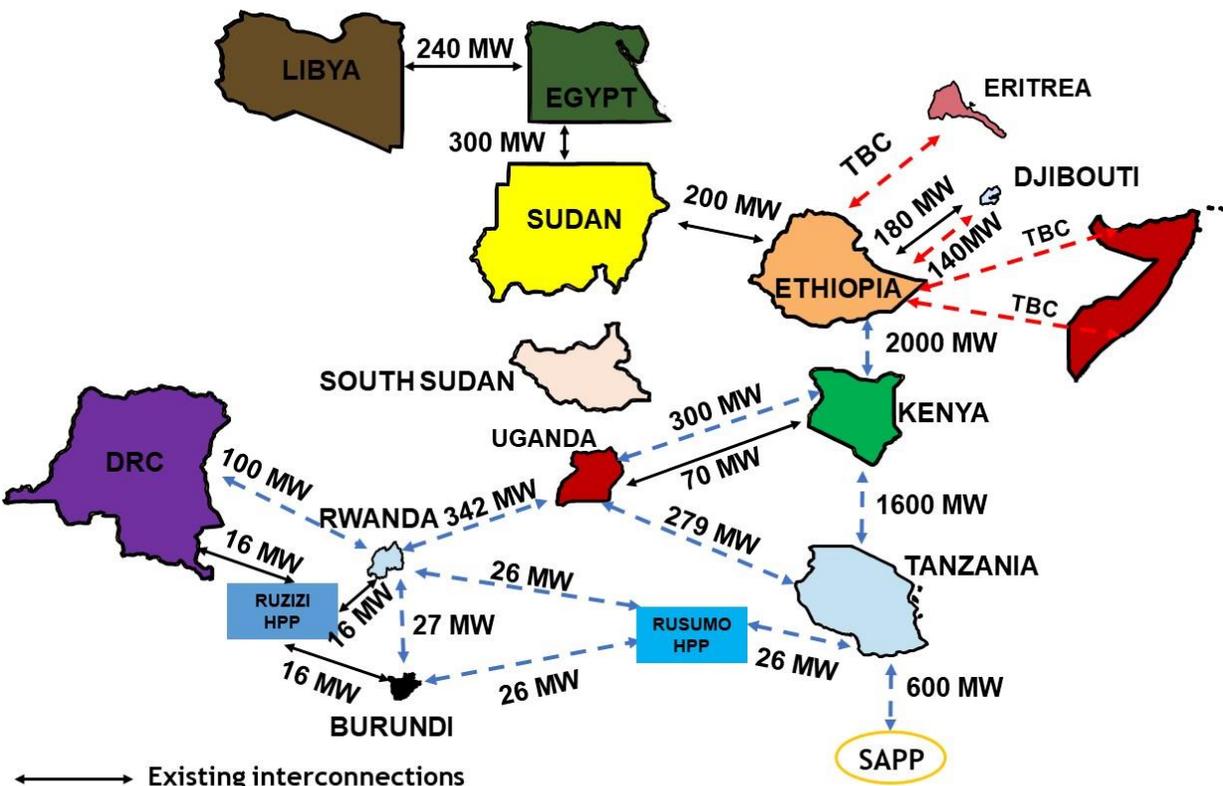


- EAPP and HoA are home to a **diverse and vast pool of low-cost renewable energy resources.**



- Regional integration can provide **win-win opportunities:**
 - Financial benefits from exports AND imports
 - Economy of scale benefits by linking regional markets
 - Increase resilience of national power system
 - Enable leap frogging of lagging regions
- There is a **strong focus on the regional integration agenda in Eastern Africa and the EAPP countries.**

The time is right for a deeper regional energy integration in EAPP and HoA

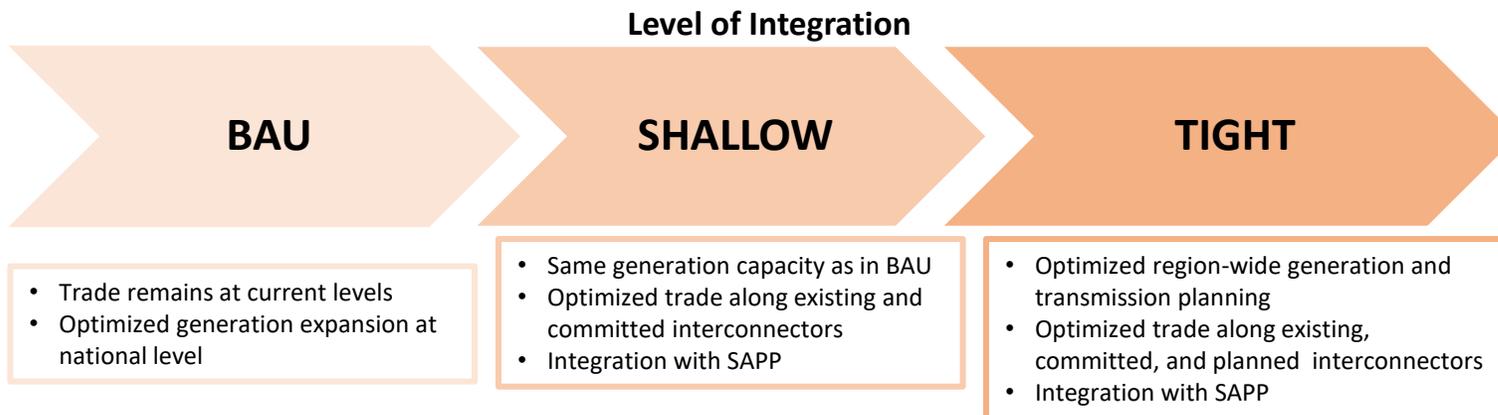
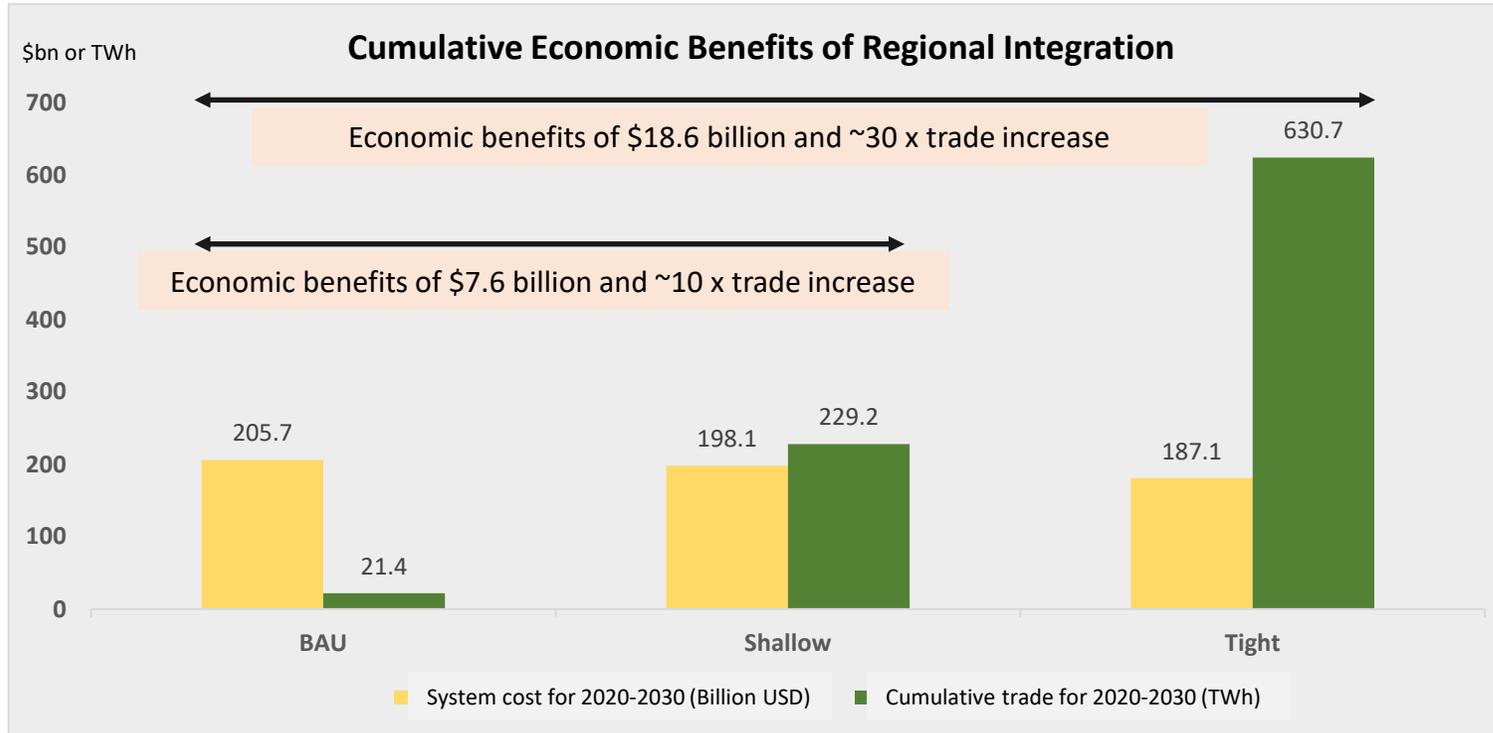


* Data as per latest EAPP Power Balance Statement (2020)

- **Massive physical infrastructure investment over the last decade in EAPP** coming to fruition. Focus on optimizing soft infrastructure.
- The **current 11 EAPP members** are expected to be connected by 2022
- Existing interconnector capacity is **~1 GW in EAPP** and **4+ GW** is expected to come online shortly
- **Soft infrastructure** is critical for optimal utilization of physical infrastructure – planning, operations, and commercial
- **HoA** needs to expand **physical infrastructure** and help drive **the development of regional soft infrastructure**.

Interconnectors	Voltage (kV)	Transfer Limit (MW)	Expected CoD
Ethiopia – Kenya (HVDC)	500	2000	2021
Uganda - Kenya	220	300	2021
Tanzania - Kenya	400	1600	2021
Rwanda - Uganda	220	342	2021
Tanzania - Zambia (EAPP-SAPP)	400	600	2025

Significant gains (~\$8 bn in medium term) from power trade can accrue to the EAPP, including HoA



- **Sizeable benefits for EAPP are possible even with little additional investments (shallow integration)**
- Economic benefits are attributed to:
 - **avoided fuel costs**
 - **reduced unmet demand**
 - **avoided operation and maintenance costs**
 - **avoided CAPEX** for new generators
 - Gains from trade with other power pools
- Shallow integration could lead to **11x increase in trade volumes** compared to levels in 2018
- Increased integration could lead to **increased RE generation** and a ~10% reduction in GHG emissions over 2020-2030
- **HoA countries**, can capture **large economic benefits from regional integration**

Power trade can evolve in a phased manner

- Develop regional power market in a phased manner: growing bilateral trade followed by a larger share of competitive trade
 - Phase 1: Scale up bilateral trade/Minimum level of operational coordination
 - Phase 2: Increased bilateral/Larger share of centralized trade
 - Phase 3: Integrated, liquid, efficient power pool with strong regional institutions
- EAPP's initial goal is to unlock bilateral trade: facilitate **PPA negotiations and commercial agreements** between utilities, adopt contract templates for power purchases and wheeling and adopt rules for cross border imbalances
- **Market design** is underway and high-level design will be completed by mid-2021



HoA countries need to actively engage in EAPP to reap the benefits of trade

- EAPP and WB convened representatives (PSs/MoE/Utility Heads) from HoA countries, IRB, African Union Commission, RECs (COMESA/EAC), and Donors (AfDB, AFD, EIB, EU, Korea EXIM Bank, NORAD, SIDA, USAID)
- *Mr. Abdourazak Ahmed Idriss*, SG of the Ministry of Economy and Finance (Government of Djibouti) and *Eng. Lebbi Changullah* (SG of EAPP) chaired the workshop
- HoA countries' representatives signed the workshop synopsis and agreed to the following endorsements:

HoA country action	
Physical Infrastructure / Planning	Continue to develop regional interconnectors Integrate regional supply options in national power sector plans
Operational	Improve compliance with the EAPP interconnection code and operating guidelines
Market	Adopt standardized bilateral power purchase agreements and foster bilateral trade Participate in the centralized market Strengthen financial performance of utilities
Institutional Strengthening	Ensure active EAPP membership by participating in technical committees to develop and improve operational and market frameworks Contribute human/financial resources to EAPP and regional regulator (IRB)

THANK YOU