



IMPLEMENTING COOPERATIVE APPROACHES in SOUTHERN AFRICA

Johannesburg / November 5, 2019

PROGRAMS

- (1) Establishing a renewable energy financing facility (CEF4SAPP) for the SAPP member countries**
 - Forwarded to TCAF (PrePIN accepted)
- (2) Reduction of technical transmission losses in power systems of Uganda, Mozambique, Zimbabwe and Zambia**
 - Implemented by German Min. for the Environment (BMU)
- (3) Reducing GHG emissions through energy efficient cooling and switching to natural refrigerants in the SAPP member states**
 - To be forwarded to KLIK Foundation (Switzerland)
- (4) Green Hydrogen and Fuel Cell Technology for the South African Transport Sector**
 - Submitted to NAMA Facility

APPROACH

Focus on **economically viable abatement potentials** within **subsectors** of the economy for increasing ambition (“step-by-step” approach)

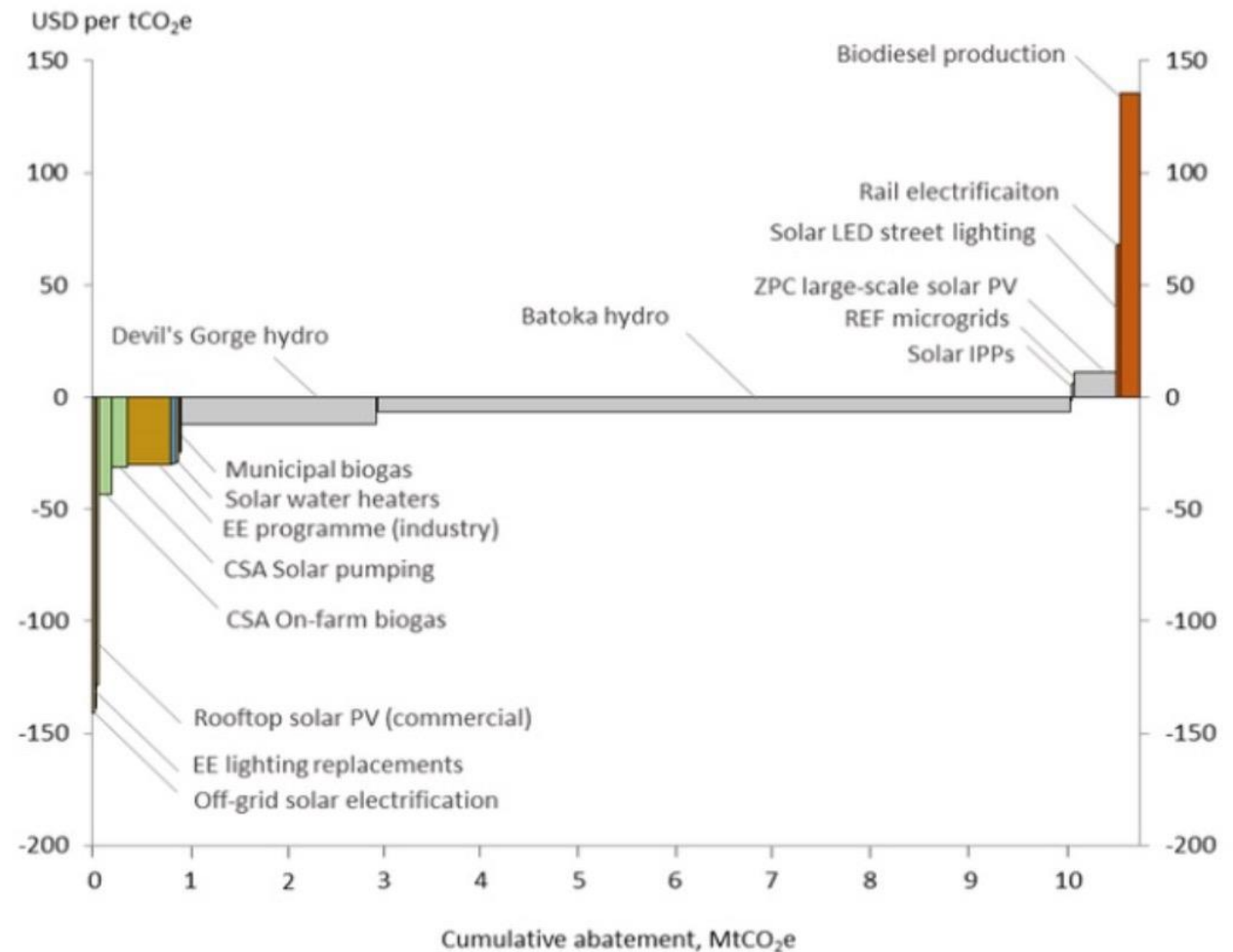
Key questions:

- What is the **mitigation potential** across economic (sub-)sectors and activities?
- Which are **suitable, cost-effective and feasible** to implement?
- What can actually be delivered against BAU and what are the **economic and financial requirements**?

ECONOMIC ANALYSIS OF MITIGATION OPTIONS

Assessing costs and benefits of options

- **Net Present Value (NPV)** calculated to assess societal economy-wide costs, impacts and benefits for each option; (Public sector DR of 6% applied to all projects)
- Calculation of **Marginal Abatement Cost (MAC)**



PROGRAM DEVELOPMENT

Clearly **definable** emission reduction targets:

- Baseline setting, MRV, GHG emission reduction calculation based on approved UNFCCC methodologies (SAPP GEF)

Embedded in national policies:

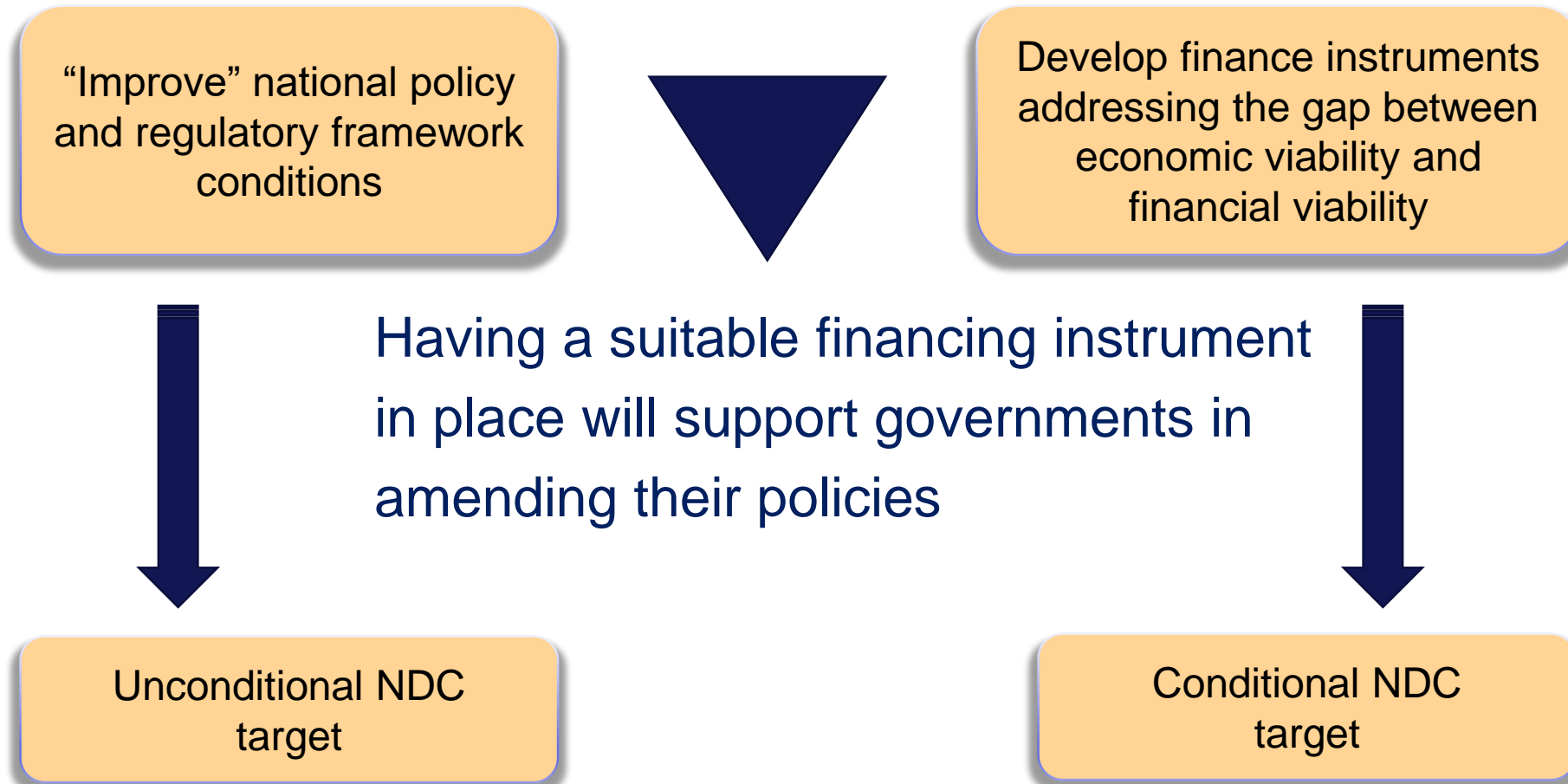
- Intensive cooperation process with national stakeholders, e.g. ministries, regulators, utilities, transmission & distribution companies, banks, private sector participants (active support required, no “desktop review”)

Strong focus on **private sector** leverage:

- Implementation of activities through private sector (industries, households) investments; high local content

IMPLEMENTATION CONCEPT

Push and Pull Approach: Use policies to harness private sector investment



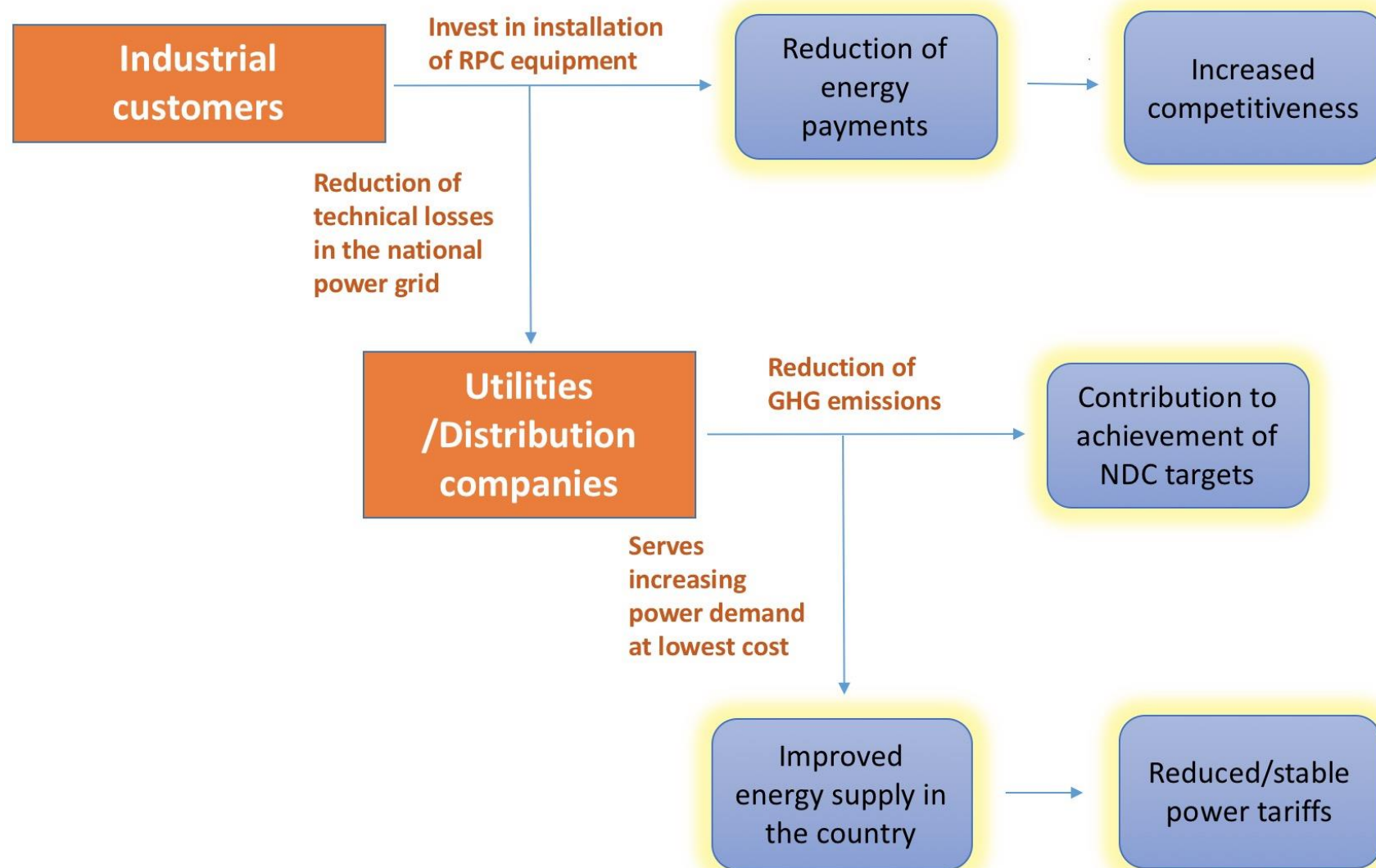
TRANSMISSION & DISTRIBUTION (TD) – LOSSES PROGRAM

The installation of Reactive Power Compensation (RPC) equipment at the premises of industrial facilities contributes to reducing the high technical energy losses in transmission and distribution networks occurring in nearly all developing countries.

The technology is proven, applied standard in all industrialized countries.



STAKEHOLDER IMPACTS



BARRIERS

The proposed implementation strategy directly addresses the **main barriers**:

- a) high upfront capitals cost that prevent investments in energy efficiency by the private sector, and
- b) potential lack of awareness and technical capacities in the countries.

FINANCING

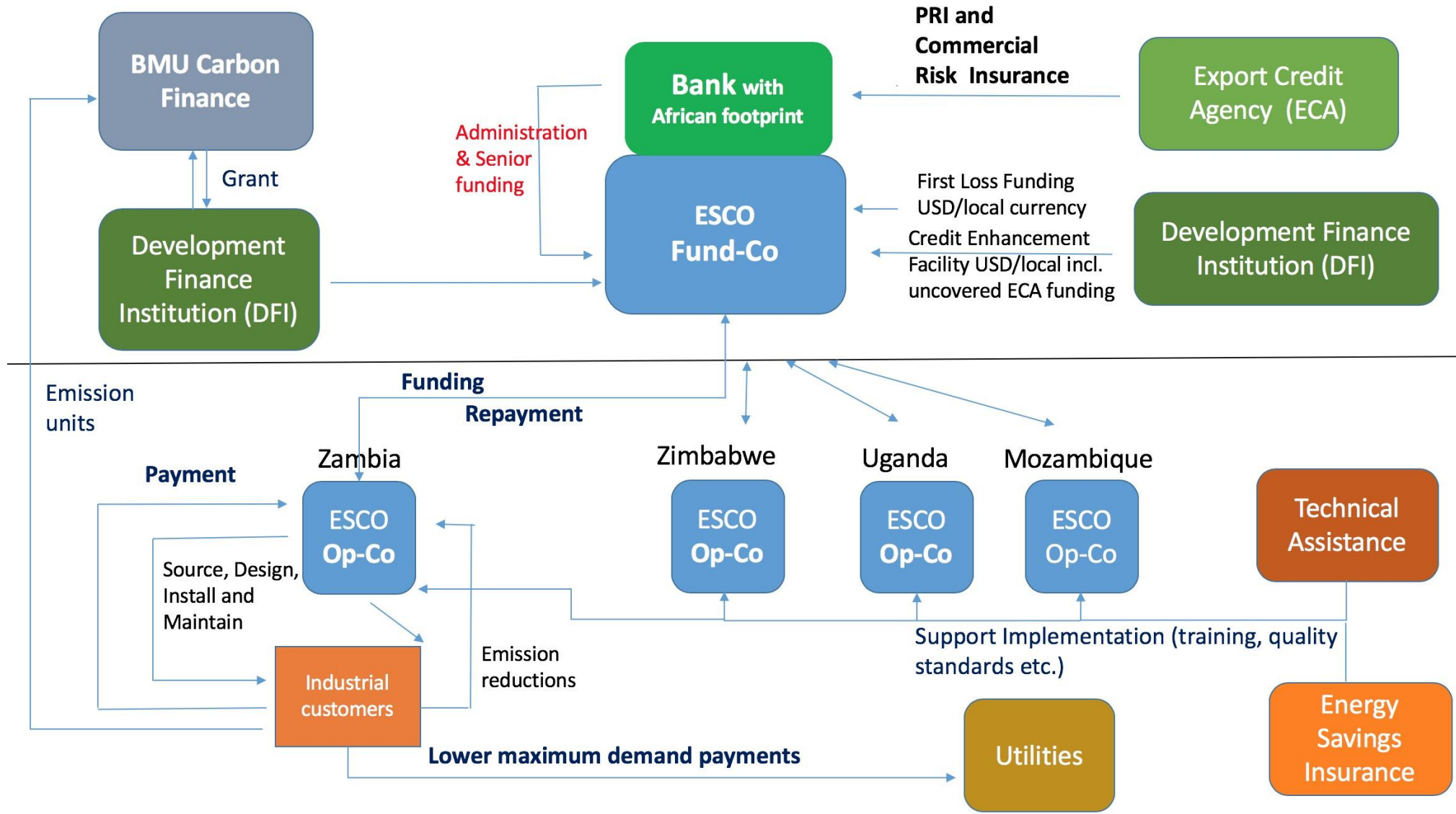
Blended finance instrument applied to bring down interest rates:

- Carbon Finance (provided by the German Ministry for the Environment)
- ECA cover (provided by the German Ministry for Economy and Energy)
- DFI funding (costs of covering the uncovered portion)

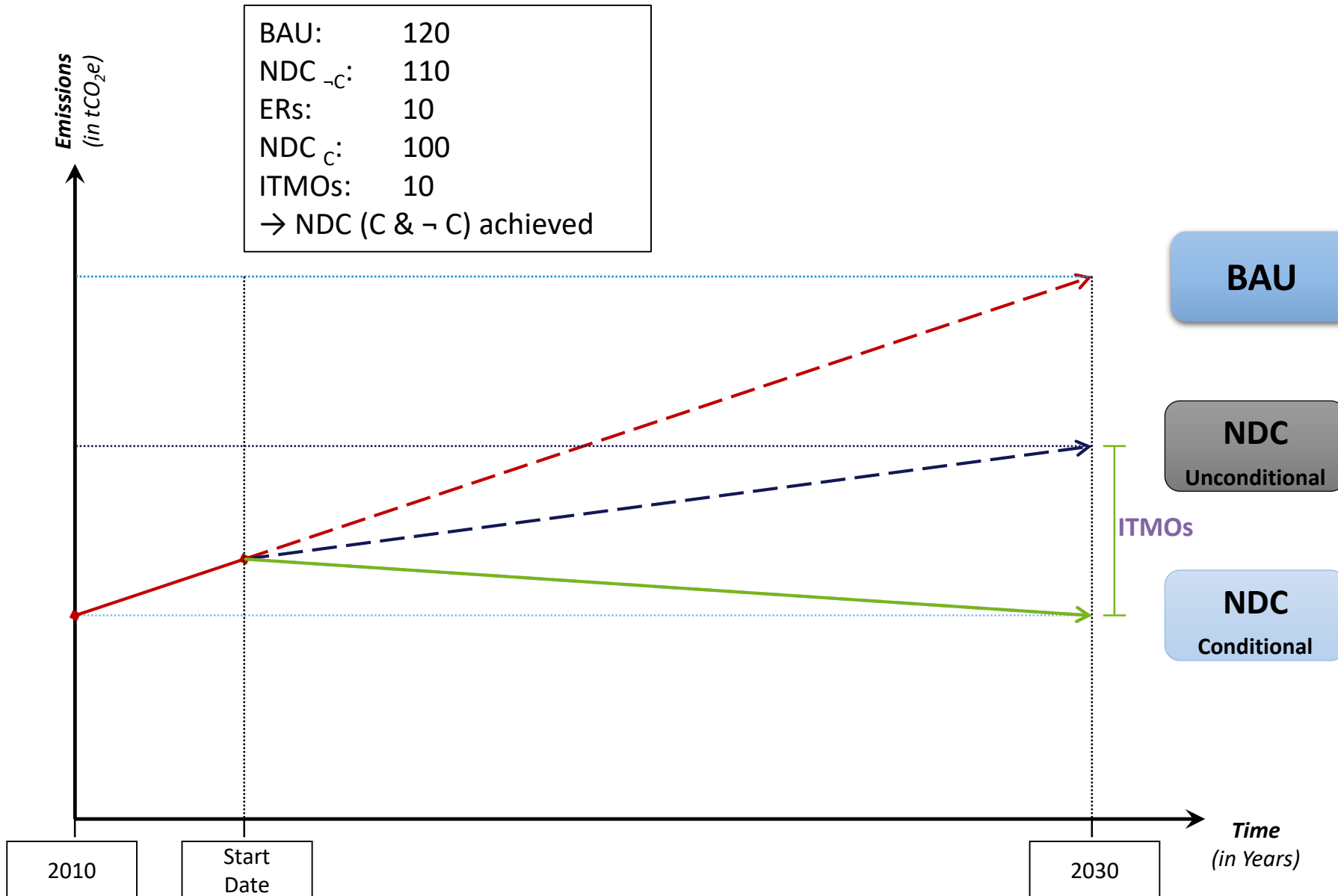
Total Program

Country	Nr Customer	Investment Need (in USD)	MD Payment Reduction (in USD/yr)	Reduction of Technical Losses (in MWh/yr)	ERs (in tCO2/yr)	ERs in Total over 15 years	One-time Carbon Payment (in USD)
Mozambique	3	1,909,562	345,082	152,496	144,734	2,171,009	1,054,029
Uganda	583	25,892,565	7,414,212	92,726	47,615	714,220	2,478,782
Zambia	535	24,937,200	12,164,358	103,222	97,968	1,469,515	2,246,103
Zimbabwe	333	15,302,485	4,879,872	174,776	165,880	2,488,194	3,261,791
Total	1,454	68,041,812	24,803,524	523,219	456,196	6,842,938	9,040,705

IMPLEMENTATION STRUCTURE



CARBON FINANCE



Thank you for your attention

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