

# Illustrative examples

# Enhancing reliability of electricity access in district hospitals in Africa

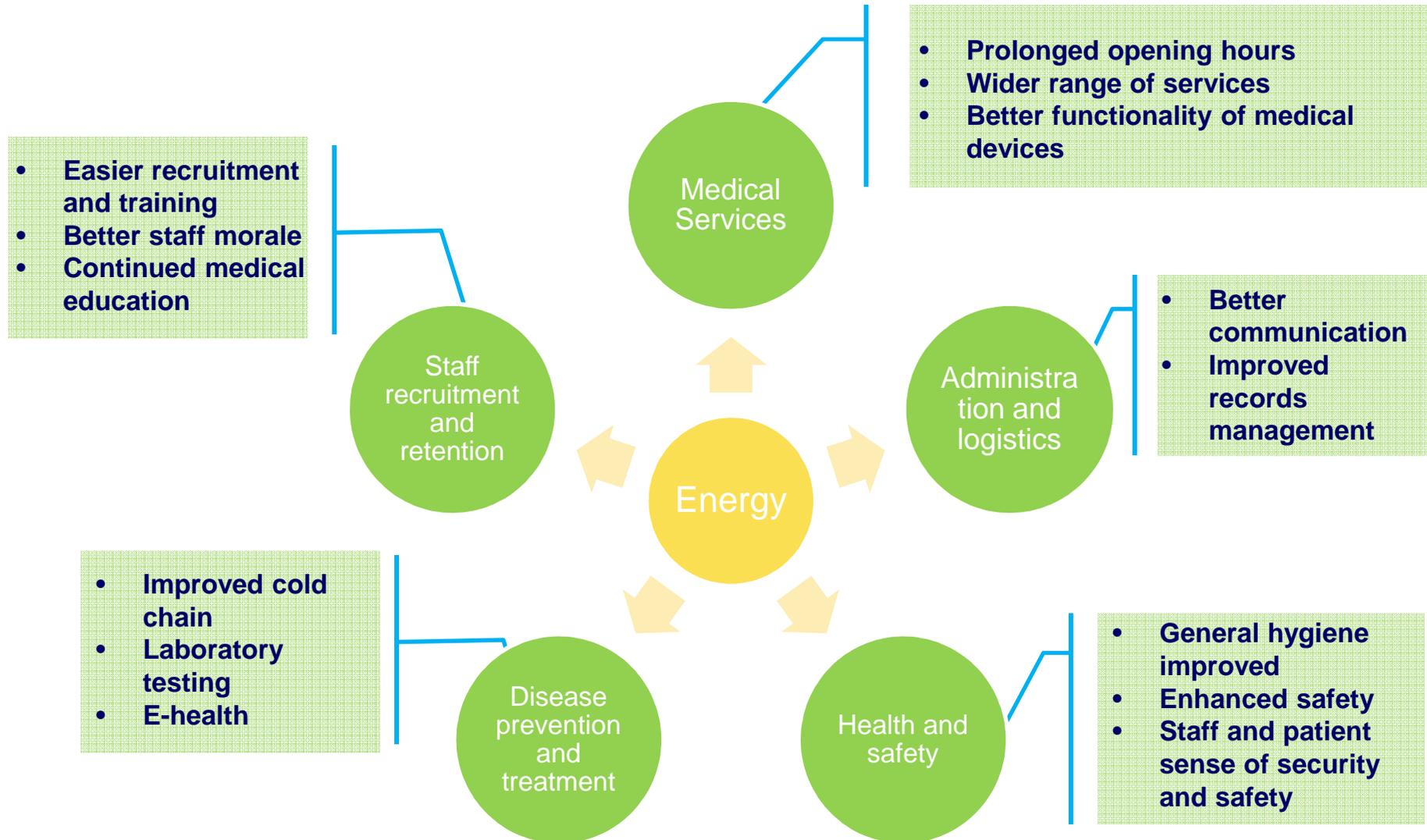
- Rationale
- Linkages with energy, climate change, and maternal and child survival
- Project overview



Photo credit: Partners in Health/Haiti

# Importance of energy to health services

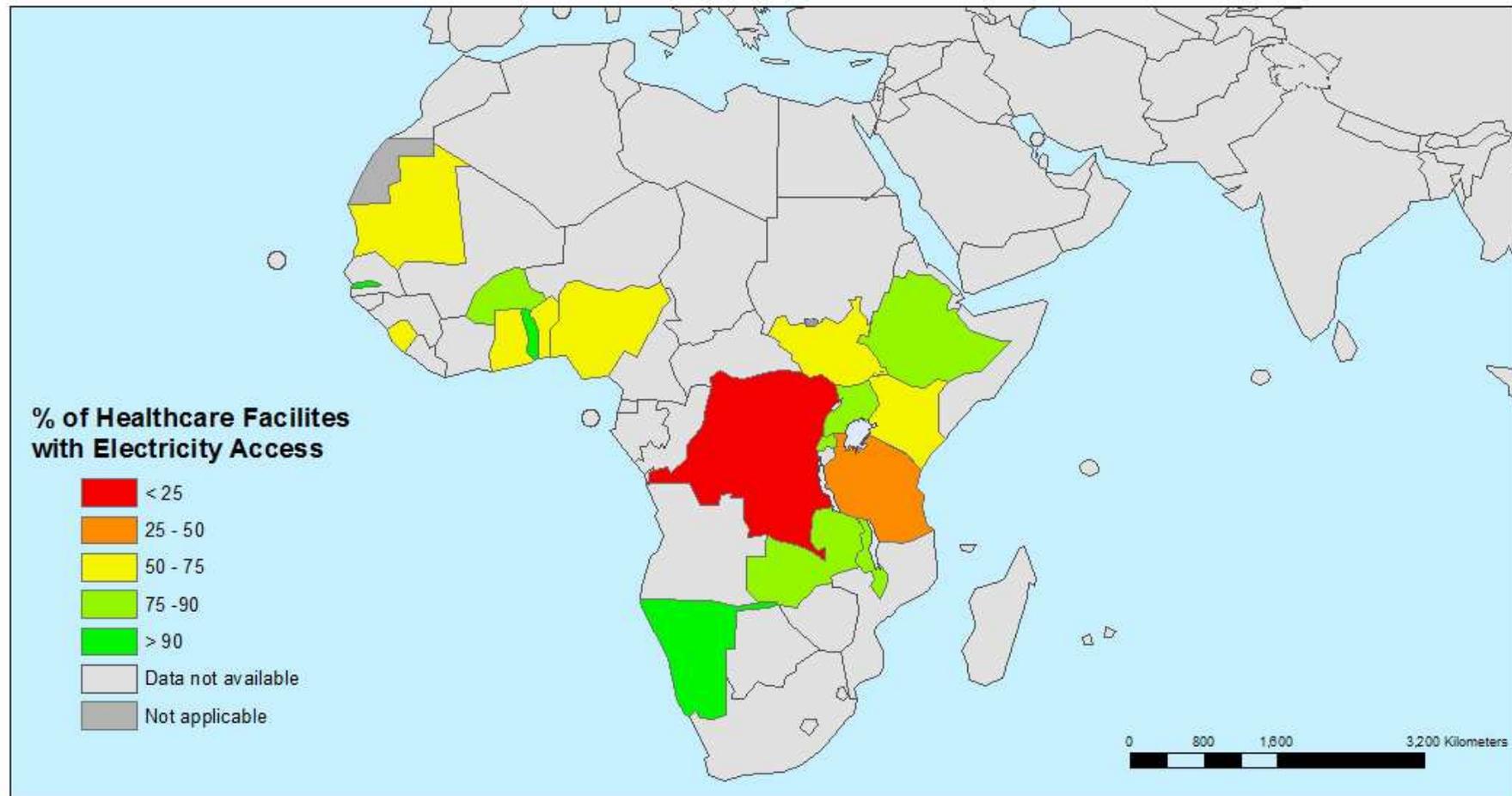
(in particular access to electricity)



Source: WHO & World Bank (2015). *Access to Modern Energy Services for Health Facilities in Resource – Constrained Settings*.

# Access to electricity a significant concern

## Percentage of Healthcare Facilities with Electricity Access



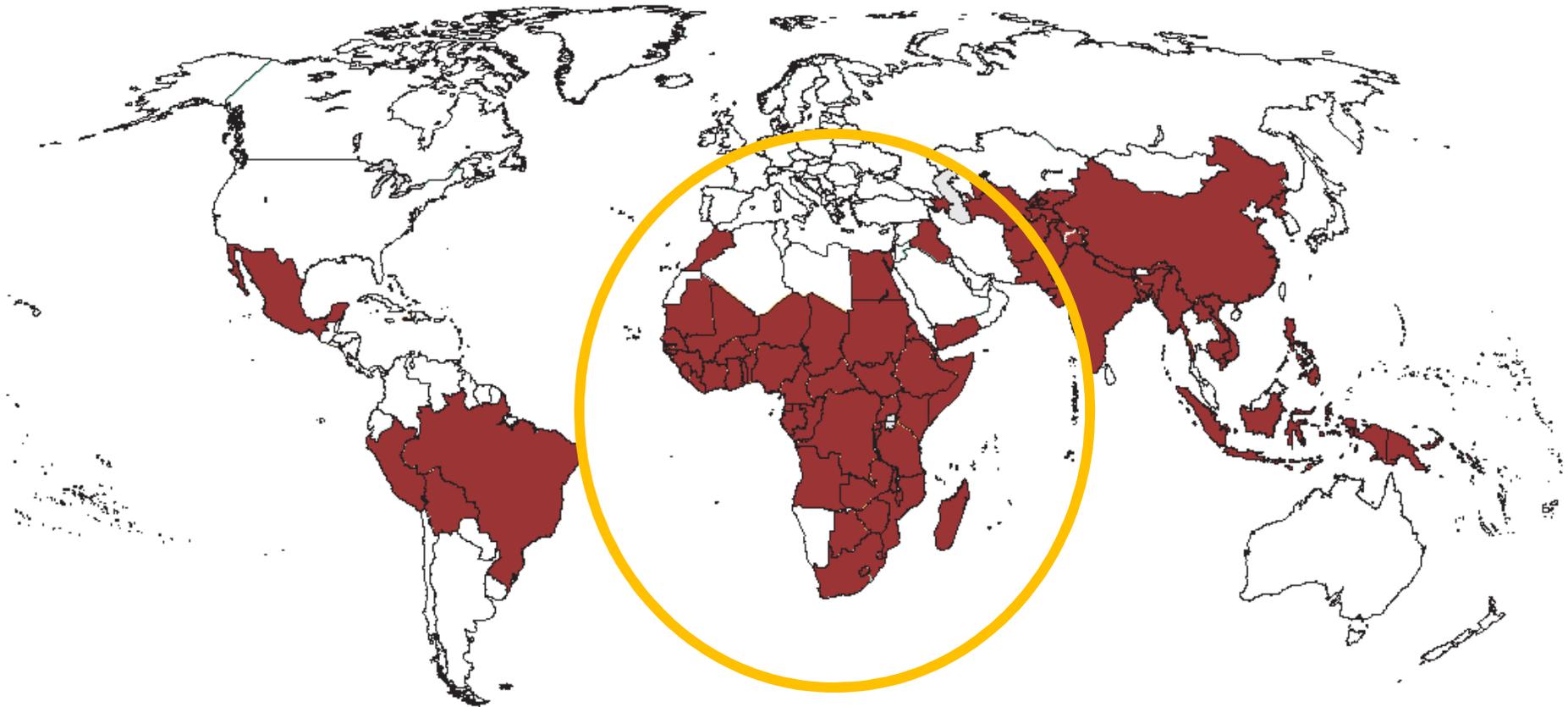
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization  
Map Production: Interventions for Healthy Environments  
World Health Organization

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# 75 countries together account for > 95% of maternal and child deaths worldwide



# Health facilities an essential setting for addressing preventable maternal and newborn mortality

- Improving quality of facility based care at time of birth a central strategy
- Electricity is a critical determinant of quality of care provided

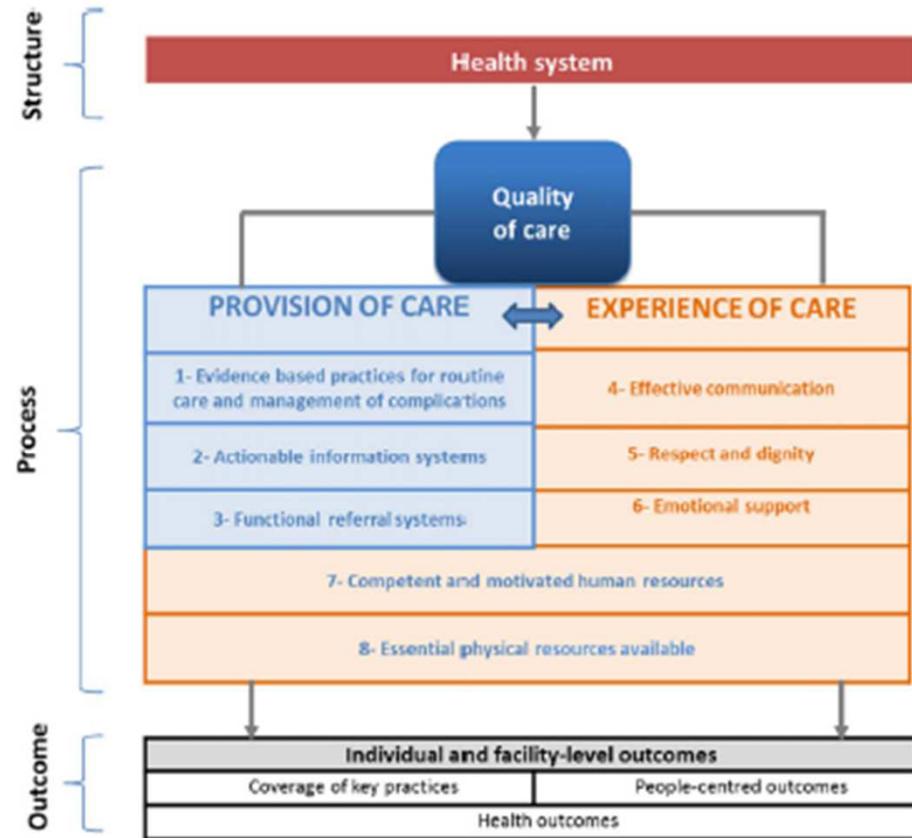


Figure 1. WHO Quality of Care Framework for maternal and newborn health.

# Linkages with the SDGs

**Ending preventable  
maternal and  
newborn deaths**  
(Targets 3.1 & 3.2)

**Access to modern  
energy and increasing  
share of renewables**  
(Targets 7.1 & 7.2)

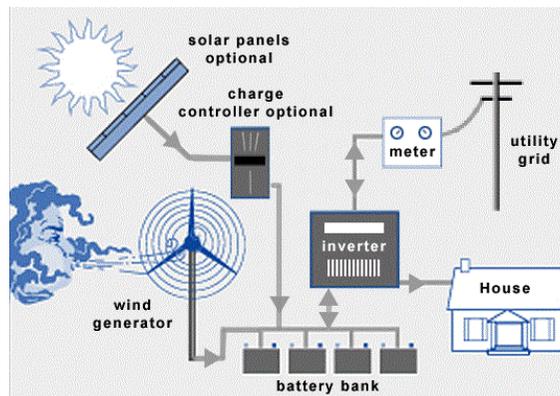
**Resilience and adaptive  
capacity to climate-  
related hazards**  
(Target 13.1)



# Opportunity associated with sustainable energy solutions



**Off-grid Solutions**



**Hybrid Solutions**



**Grid Extension**



**Energy Efficient Equipment**

# Opportunities to finance "green energy" infrastructure in health facilities

The screenshot shows the UNFCCC website's Climate Finance page. At the top left is the UNFCCC logo and the text "United Nations Framework Convention on Climate Change". To the right is a search bar labeled "UNFCCC Google Search" and social media icons for Facebook, Twitter, and Google+. Below the header is a navigation menu with "Home", "CDM", "JI", "CC:iNet", and "TT:Clear". The main content area features a "NEWSROOM Get News on the Latest Climate Action" box, a "KEY STEPS" section with links to "The Convention", "Kyoto Protocol", and "Paris Agreement", a "NEGOTIATIONS" section with links to "Meetings", "Documents & Decisions", and "Bodies", a "FOCUS" section with links to "NDC Registry" and "INDC Portal", and a "PROCESS" section with links to "Overview", "Adaptation", "Climate Finance", "Mitigation", and "Technology". The "Climate Finance" section is highlighted. Below this is a "FOCUS: Climate Finance" heading, followed by a large image of a person covering their eyes in front of a stock market display. Below the image is a "Climate finance" heading and a paragraph of text: "Climate finance refers to local, national or transnational financing, which may be drawn from public, private and alternative sources of financing. Climate finance is critical to addressing climate change because large-scale investments are required to significantly reduce emissions, notably in sectors that emit large quantities of greenhouse gases. Climate finance is equally important for adaptation, for which significant financial resources will be similarly required to allow countries to adapt to the adverse effects and reduce the impacts of climate change. Continue". Below this is a "More on UNFCCC Climate Finance work" heading and a table of links:

<a href="#">Climate Finance main page</a>	<a href="#">Climate Finance Portal</a>	<a href="#">Fast-start Finance</a>
<a href="#">Standing Committee on Finance</a>	<a href="#">Long-Term Finance</a>	<a href="#">Green Climate Fund</a>
<a href="#">Global Environment Facility</a>	<a href="#">Adaptation Fund</a>	<a href="#">Review of the Financial Mechanism</a>

# Related WHO activities:

## energy audits in district hospitals in Africa

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- **Objective:**

- To develop a model for improving energy services (particularly electricity) provided to health facilities using renewable energy technologies

- **Scope of focus:**

- District hospitals and facilities that provide emergency obstetric services;
- Applications in low income settings particularly vulnerable to climate change

# Focus of hospital energy audits

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- A. To determine minimum energy requirements of essential package for maternal and child health

CHILD BIRTH  
PRENATAL CARE  
BLOOD BANK  
LABORATORY  
INFECTION PREVENTION  
SURGERY  
EMERGENCY RECUSCITATION

Determine minimum electricity needs based on WHO and national standards of quality of care



# Focus of hospital energy audits (continued..)

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## B. Analyze options for enhancing energy services in the target hospitals

GRID + GENERATOR

GRID + GENERATOR + SOLAR

GRID + SOLAR

SOLAR ONLY

Examine differences in cost, reliability, and climate and other environmental emissions (e.g. air pollution)



# Where are we?

Activity	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16
Contracting of international and national consultants			③, ④				
Preparatory work, e.g. on tool development, data collection systems (e.g. spreadsheets), interview guides, etc.							
Consultations with key project stakeholders to determine facility selection criteria and identify candidate hospitals for the energy audits		①, ②					
Conduct health facility energy audits				ETHIOPIA	KENYA		
Summarize initial findings present recommendations in stakeholder workshop				ETHIOPIA ⑤	KENYA ⑥		
Prepare final report and case study documenting lessons learned							⑦



# Other relevant WHO initiatives

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- Evaluation of the impact of health facility electrification - smaller health centres - on service delivery outcomes (2016 – 2019)
- Monitoring and reporting on the energy gap in health care facilities.....
- Advocacy and outreach, including through SE4ALL where WHO is co-leading together with UNF and UN Women a high-impact opportunity on health facility electrification