



Integrated Energy Access Planning

Unlocking action and finance for clean cooking in developing countries

IEA Bioenergy / UNIDO online workshop

Opportunities of bioenergy and biofuels in developing economies

May 2023

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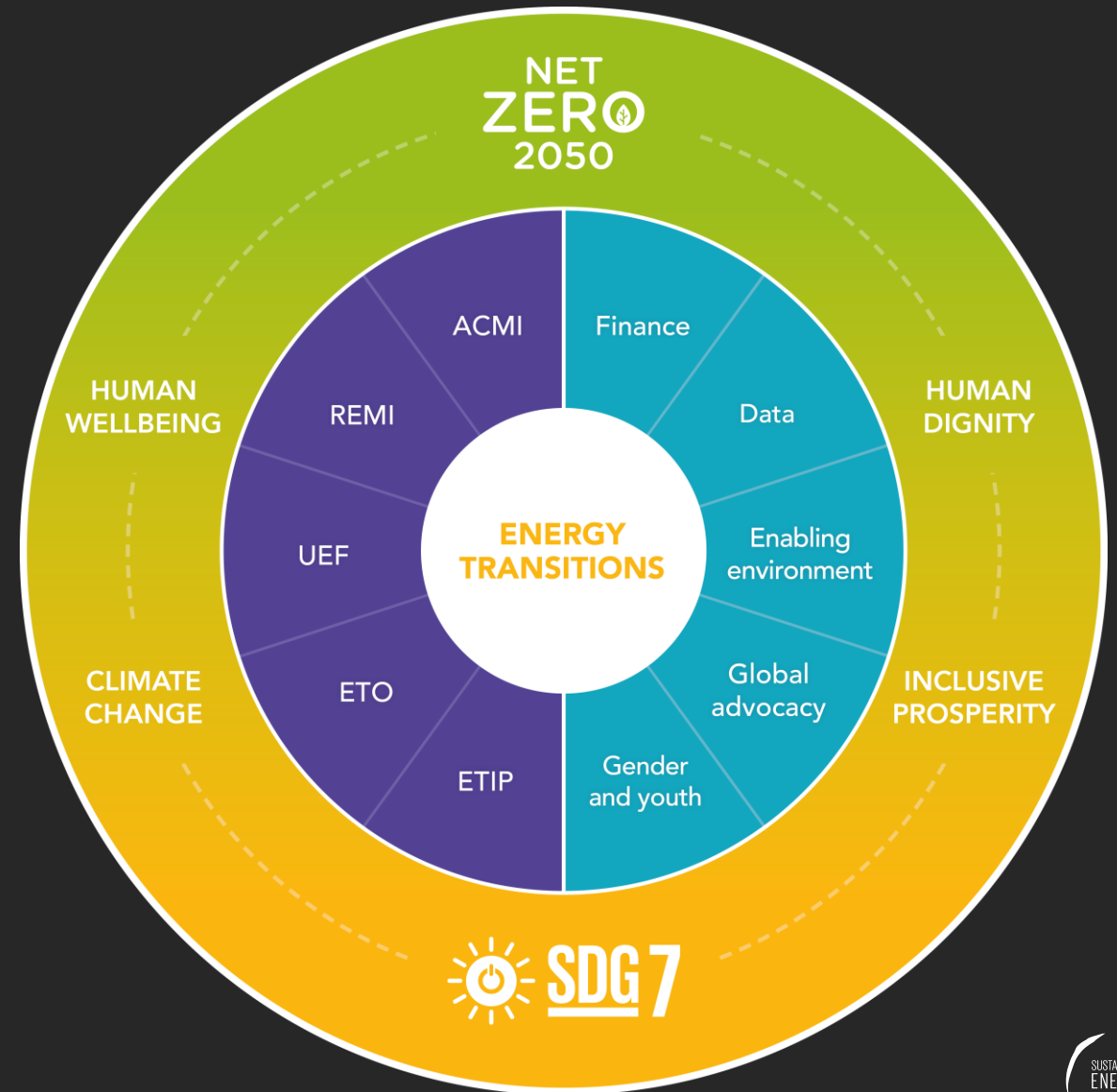
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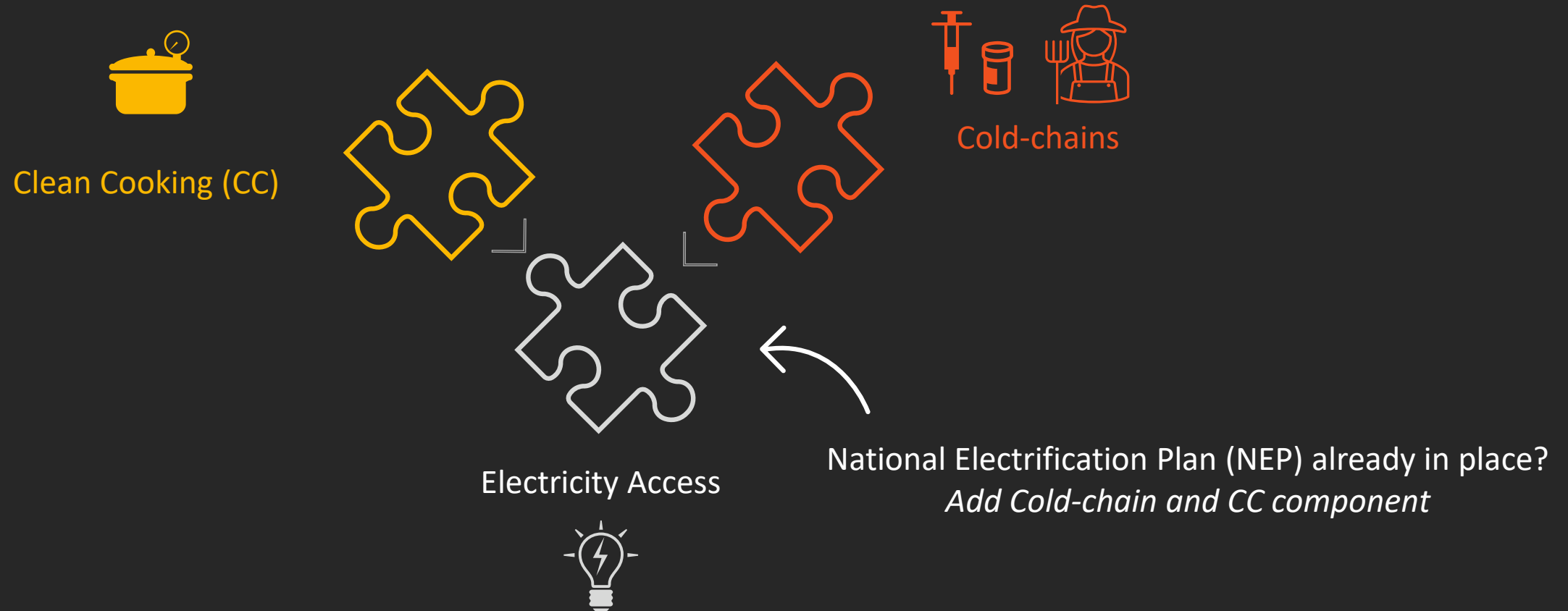


SEforALL - Who we are and what we do

- Recognize urgency of SDGs and address human, economic, and environmental costs
- Implement systemic solutions to unlock countries from high carbon futures
- Collaborate with impacted communities and countries for tailored, affordable, and effective solutions
- In the energy policy development process, we collaborate with partner governments to provide fact-based evidence and identify sustainable energy opportunities. We support them in achieving **universal energy access** and **net-zero emissions** through tailored initiatives



Integrated Energy Access Planning (IEP)



Integrated Energy Access Planning

Capabilities



Least-cost technology mix to electrify households and social infrastructure (by 2030)



Integrating electrification, medical and agricultural cold-chains and access to clean cooking analysis with geospatial components



Associated costs, budget implications and prioritization of sites for each technology type

Opportunities

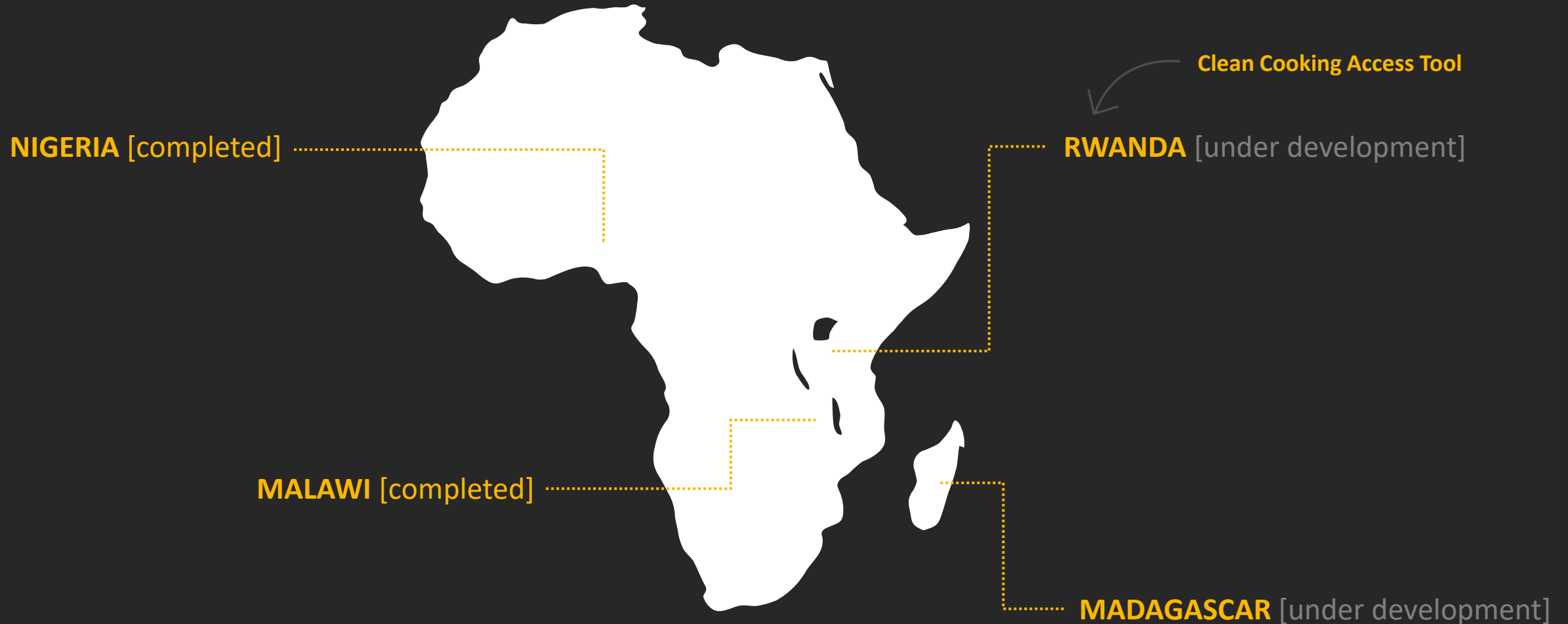


A holistic and integrated national plan helps de-risk investments for the sector with the certainty of data-driven geospatial planning



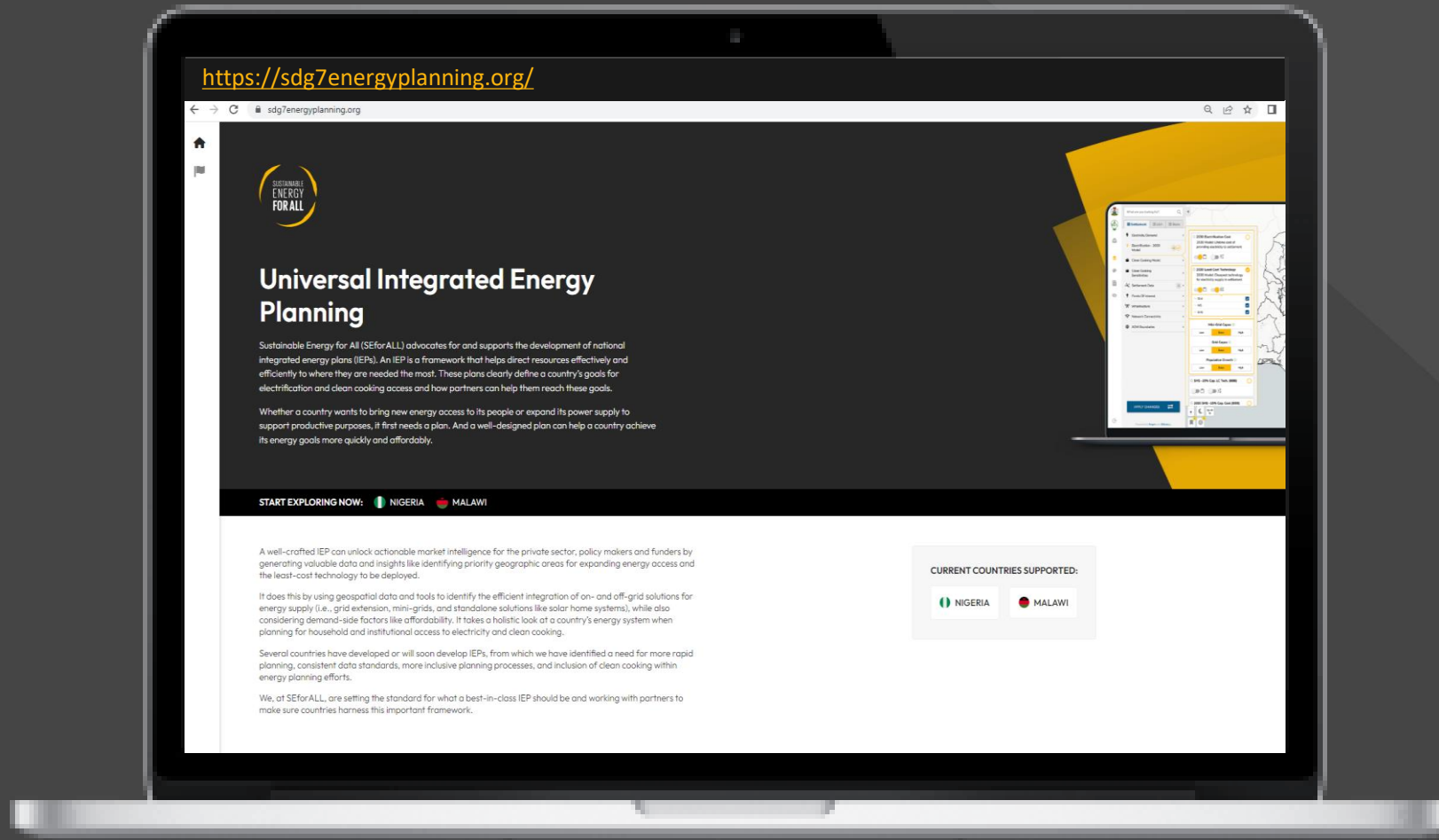
Enables the efficient and effective implementation of energy interventions by unlocking access to finance

SEforALL - Integrated Energy Access Planning



Access to tools and data – key for *Access planning*

Online access
for ALL



Example Insights from IEPs



Integrated Energy Access Planning in Malawi



Malawi – Electrification Report

This report covers the least-cost electrification pathways for the country to reach universal electrification, and ultimately achieve SDG7.1, accounting for the current infrastructure and demography. It provides actionable intel for private as well as public sector energy planners.

[DOWNLOAD HERE](#) →



Malawi – Cold Chain Report

This report includes the results of cold chain capacity utilization and assessment, facility energy needs assessment and recommendations for effective cold chain management for both COVID-19 vaccines as well as routine immunization coverage for Malawi.

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Malawi – Clean Cooking Report

This report provides an overview of clean cooking opportunities to be achieved by 2030. By utilizing a dynamic data-driven methodology, the report identifies a mix of modern and cleaner cooking technologies and solutions to achieve SDG7.1 targets by 2030 including realization of Malawi's SDG7 Cleaner Cooking Compact.

[DOWNLOAD HERE](#) →

Bioenergy Opportunities for Cooking

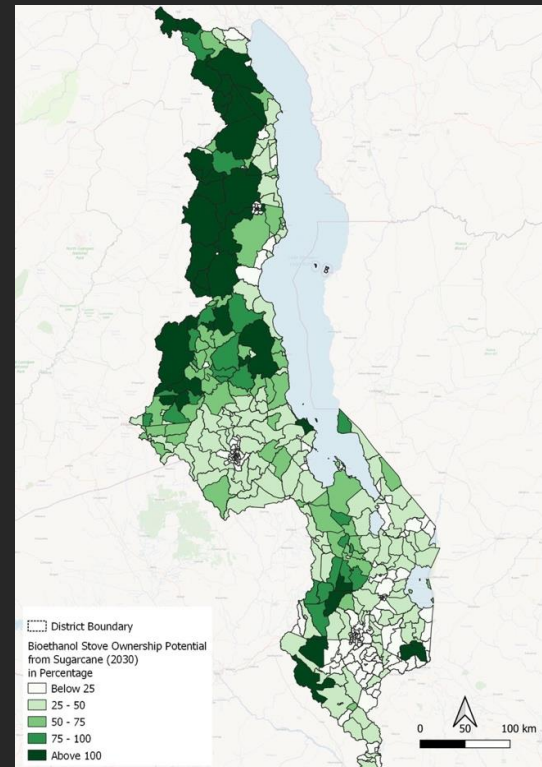
The national maximum potential for bioethanol, pellet/briquette, and biogas fuels under the IEP scenario in Malawi equate to a total of **155.6%, 100.7%, and 28.3%** of total household energy demand in 2030, respectively.

→ This represents an underutilized opportunity that may have to be explored.

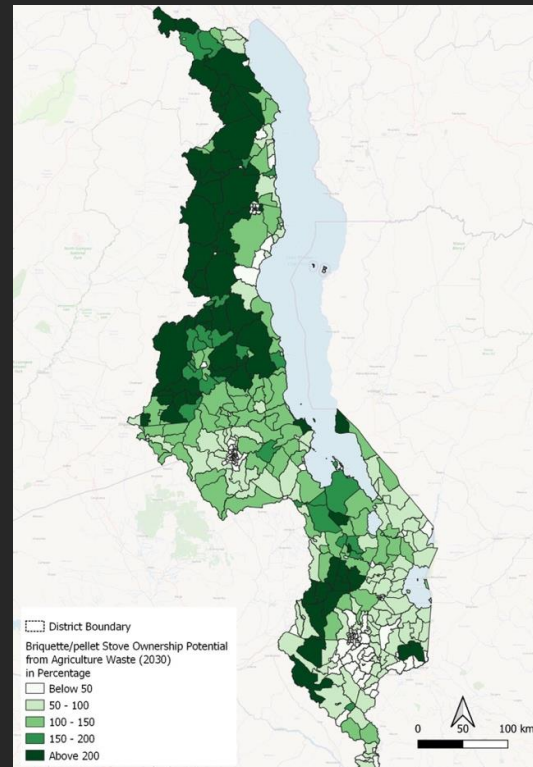


- Cropland covers a significant portion of rural Malawi
- Existing production facilities could be expanded to supply cooking fuel → Costs and food security challenges
- Geospatial information can inform placement of production facilities

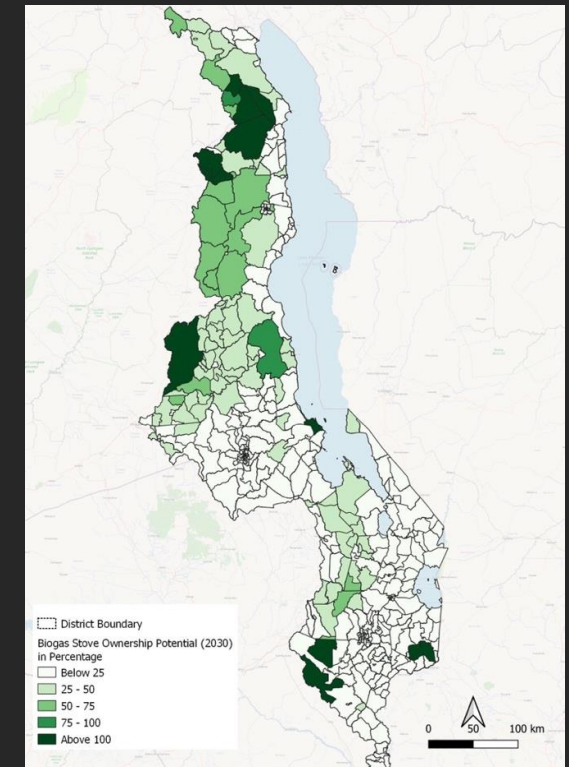
BIOETHANOL POTENTIAL (2030)



PELLET/BRIQUETTE POTENTIAL (2030)



BIOGAS POTENTIAL (2030)



Reference: <https://malawi-iep.sdg7energyplanning.org/>

Benefits of Clean Cooking

Fuel (stove)	Health Exposure (PM2.5/day/person)	
	Outdoor	Indoor
Firewood (3-stone)	26.7	139.1
Firewood (basic)	14.9	77.6
Firewood (improved)	13.8	71.9
Firewood (improved - portable)	13.8	71.9
Firewood (improved - fixed)	12.4	64.7
Charcoal (basic)	29.8	154.7
Charcoal (improved)	17.5	91.0
Briquette/pellet	28.5	148.1
Biogas	0.1	0.5
Bioethanol	0.1	0.4
LPG	0.1	0.3
E-cooking (hot plate)	0.0	0.0
E-cooking (induction)	0.0	0.0

	Emissions reduction (%) ¹	Health		Fuel collection time saved (hrs./HH/year)
		DALYs ² avoided (no. of years)	Deaths avoided (no. of cases)	
IEP Scenario	85.9 ↓	1.7M ⊘	30.6k ⊘	50 - 125 ↑

¹ CO2 emissions from residential cooking and heating applications associated per capita

² Disability-adjusted life years (DALYs)

Reference: <https://malawi-iep.sdg7energyplanning.org/>

From Planning to Implementation

While IEPs can significantly improve the enabling environment, the next step is to raise the finance and bring in partners to implement the plans

Key Ingredients to success

- ✓ Data-driven insights (IEP)
- ✓ Sectoral buy-in
- ✓ Strong regulatory environment
- ✓ Private sector participation
- ✓ Sustained capacity development
- ✓ Key partners coming together to collaborate



**IEPs help articulating
gaps**

INTEGRATED ENERGY PLANNING TOOLs

Available for:



Under development:



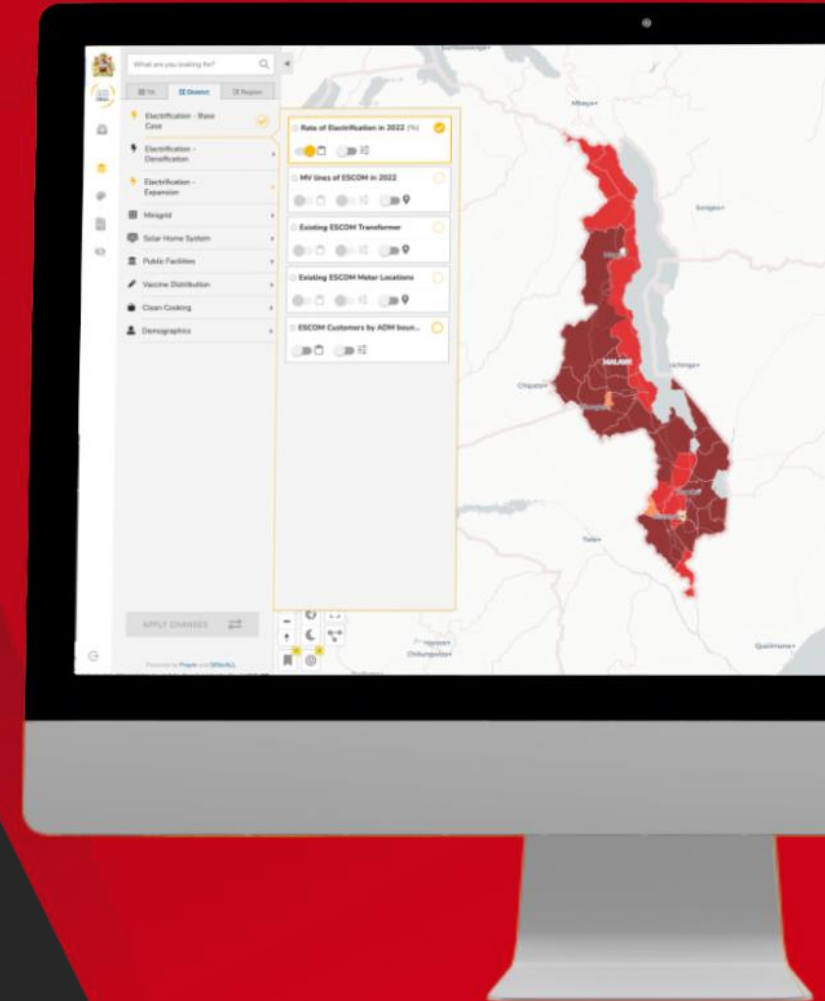
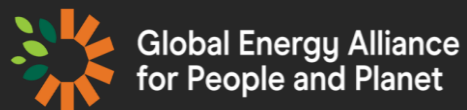
EXPLORE IT FOR YOURSELF

<https://sdg7energyplanning.org/>

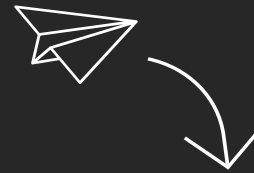
POWERED BY:



IN PARTNERSHIP WITH:



Thank You!



For any questions and inquiries please email: iep@seforall.org



Aim your mobile
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Please check out the
Malawi IEP!