



# OnSSET/Global Electrification Platform

Hands-on 1: Exploring electrification investment scenarios using the GEP Explorer<sup>1</sup>

Useful links:

- 1) The [Global Electrification Platform](#) – Explorer (GEP Explorer)

## Learning outcomes

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By the end of this exercise, you will be able to:

- 1) Explore electrification scenarios on the GEP Explorer
- 2) List a few key parameters affecting the costs in the scenarios

## Global electrification platform

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In this exercise, you will explore electrification investment scenarios using the Geospatial Electrification Platform (GEP) – Explorer. The GEP Explorer allows the user to browse least-cost electrification strategies around the world, interact with country contextual data and many different investment scenarios. Find and access the GEP Explorer [here](#).

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<sup>1</sup> This exercise is an exercise adopted from: Korkovelos, A., Sahlberg, A., Khavari, B., 2019 Exercise 1: Exploring electrification investment scenarios using the Explorer [WWW Document]. OnSSET Teaching Kit. URL [https://onsset.github.io/teaching\\_kit/courses/module\\_1/Excercise%201/](https://onsset.github.io/teaching_kit/courses/module_1/Excercise%201/) (accessed 2.18.21).

All images are screenshots from <https://electrifynow.energydata.info/> with permission from World Bank to use for this hands-on.



## How to use

From the landing page, click on **START EXPLORING** to go to the country selection.

A screenshot of the Global Electrification Platform (GEP) landing page. The page has a dark blue background with white and yellow text. On the left, there is a vertical navigation bar with icons for home, search, settings, and information. The main content area features the text "WELCOME TO THE Global Electrification Platform" and a description: "Explore least cost electrification strategies around the world, interacting with country contextual data and different investment scenarios." Below this, it displays "02 MODELS" and "58 COUNTRIES" in large yellow numbers. Two buttons are present: "START EXPLORING" (blue) and "LEARN MORE" (white). At the bottom, logos for ESMAP (Energy Sector Management Assistance Program) and the World Bank Group are shown.

GEP

WELCOME TO THE  
**Global Electrification Platform**

Explore least cost electrification strategies around the world, interacting with country contextual data and different investment scenarios.

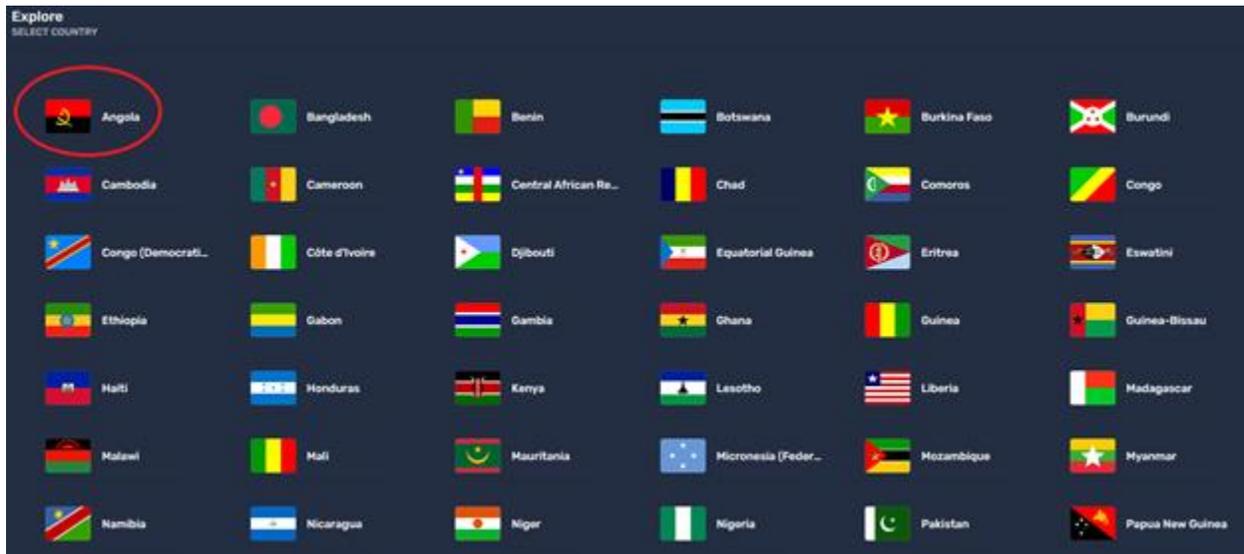
**02** MODELS    **58** COUNTRIES

[START EXPLORING](#)    [LEARN MORE](#)

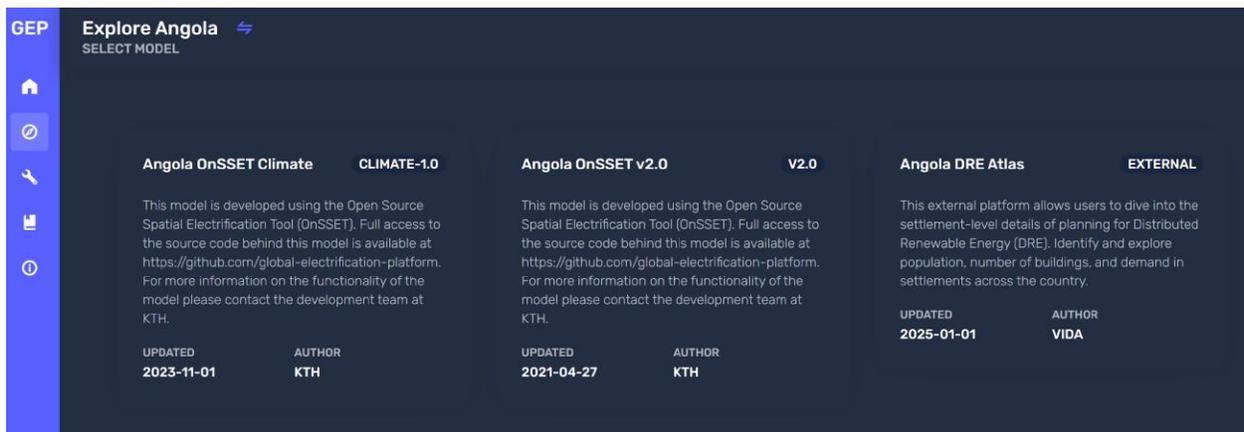
ESMAP  
Energy Sector Management Assistance Program

WORLD BANK GROUP

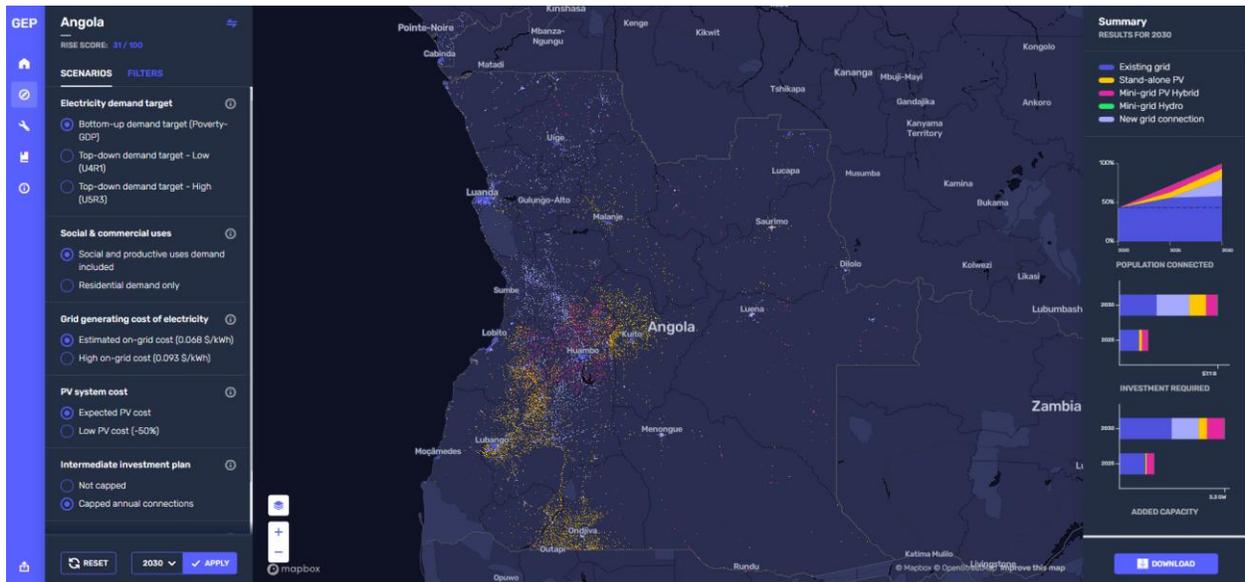
Next, click on the country for which you wish to browse electrification investment scenarios. In this exercise, we will be **exploring Angola**.



Here, you will be able to look at different models. In this exercise, select the one in the middle called **Angola OnSSET v2.0**.



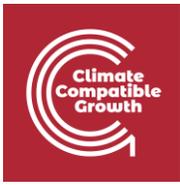
On the country page, there are several things to explore. In the middle are the results for each cluster in the country, the colour indicating the least-cost electrification technology in the cluster. To the right are the summaries for the whole country, displaying the people to receive electricity from each technology, the investments required, and the new capacity required for that scenario. On the left, you can change the scenario. There are 6 Levers available, each with two or three lever options. To change to a different scenario, select another lever option, then press **APPLY**.



Each scenario is run in two time-steps, from 2020 to 2025, and from 2025 to 2030. Next to the **APPLY** button you can set the year for which you want to see the results, either 2025 or 2030. Remember to press **APPLY** to load the new results if you change the year.

Finally, you can also apply a number of filters, e.g., which technology options to display are shown in clusters with specific population ranges and so on. Again, click **APPLY** to apply the filter.





### **Type B - The PV mini-grid developer**

**Task:** In this exercise you are an international solar PV mini-grid developer who is considering expansion of your business to the country. You have found the electrification scenarios online and want to use them to see how large the market for PV mini-grids may be.

**Find the correct answer for the following Question (this will appear in the MCQ section):**

**Q3:** Changing which Lever can lead to the largest share of population connected to PV mini-grids in Angola by 2025 (change only one at a time, with all other levers set to default values (Bottom-up demand target, Social and productive uses demand included, Estimated on-grid cost, Expected PV cost, Capped annual connections, Nationwide Least Cost approach)?