**UNDP Energy Moonshot Tracker**

The Pathway to 500 million

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Table of Contents

[1. Introduction 1](#_Toc1566548575)

[a. UNDP’s Energy Portfolio 1](#_Toc1911360331)

[b. The UNDP Energy Moonshot 1](#_Toc1537972940)

[2. Methodology 1](#_Toc514487033)

[a. Approach 1](#_Toc1265104091)

[b. Types of Energy Beneficiaries 1](#_Toc1208400317)

[c. Process 2](#_Toc509765058)

[i. Analysis of VF and Non-VF Project Documents 2](#_Toc772715968)

[ii. CO Validation of project outputs 2](#_Toc142342501)

[iii. Data cleaning 2](#_Toc1076022297)

[iv. Application of methodology to convert outputs to beneficiaries 2](#_Toc937674256)

[v. CO Validation of beneficiary outputs 2](#_Toc611499353)

[3. Results 2](#_Toc487427580)

[a. Summary 2](#_Toc1127829491)

[b. Results by project type 2](#_Toc1848855324)

[c. Results by country grouping 3](#_Toc1604978486)

[d. Results by beneficiary tier and category 3](#_Toc925188890)

[4. Discussion and Next Steps 4](#_Toc1356329069)

[a. Next steps for tracker 4](#_Toc936229860)

[b. Linking with the other UNDP Moonshots 4](#_Toc1932335823)

[c. Tracker app 4](#_Toc223534018)

[d. Recommendations 4](#_Toc1256063323)

# **1. The Sustainable Energy Hub**

## a. The UNDP Energy Moonshot

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| **UNDP Energy Moonshot** | Catalyse unprecedented actions and partnerships to support the provision of access to sustainable, affordable, and reliable energy to 500 million more people by 2025 and accelerate the transition to renewable energy through systemic changes that lead to inclusive green economies. |

The biggest challenge of our time is to transform the global energy system into a low-carbon and net-zero emissions pathway, fast enough to achieve the goals of the Paris Agreement, while meeting the Sustainable Development Goals (SDGs), and leaving no-one behind.

**UNDP’s 2022 – 2025 Strategic Plan has embedded energy access as one of four critical moonshots for development.** The energy transition will take place everyone in the world. To be just and sustainable, it must involve achieving both universal access to modern energy services and moving towards clean energy supplies. All five of the other signature solutions, on poverty, governance, resilience, the environment, and gender equality, have close ties to energy.

**UNDP’s Sustainable Energy Hub is designed to respond to these challenges and harness networks, experience, and innovation**. The Sustainable Energy Hub brings together and catalyses UNDP’s work on energy for development. It is a network of partners who work alongside countries to transform energy systems through integrated policy, technology, and financing shifts. It supports this transformation as inherent to the broader goal of sustainable development, and helps countries build net-zero emissions societies that put people first and leave no one behind. To enable systemic actions, the Sustainable Energy Hub will drive a nexus approach focused on integrated and interdependent programming, including through programme portfolios, policy support and institutional strengthening. It will strive to change the nature and scope of investment in the just energy transition. It focuses on three pillars of sustainable energy for development:

1. *Close the gap in energy access*. So that marginalized people and communities gain access to sustainable, clean energy and the dignity and opportunities it brings.
2. *Accelerate the energy transition* through systemwide changes that support a green economy by bringing together the best ideas from the worlds of government, business, finance, digital, and most importantly, from people, communities and civil societies.
3. *Scale up energy finance*with the public and private sector, across global, regional and local ecosystems for finance, innovation and investment.

**Working with partners to support their efforts on delivering energy access and scale up the UNDP’s impact is essential to achieve the energy moonshot**. UNDP’s comparative advantage lies in its ability to leverage its integrator mandate and maximize partnerships across the UN and other partners and can offer an integral development focus combining multiple development benefits that are enabled by clean energy; and reaching those “left behind” and hard-to-reach areas. Delivering independent technical advice using our in-country presence and knowledge of the local context and stakeholders will address unmet demand.

**UNDP is taking a portfolio approach, moving beyond single projects and toward systemic solutions**. This work is also shaped by UNDP’s innovation experience and expertise that recognize a radical re-thinking of our approach away from the fragmented project-based towards a programmatic and policy-based approach that aims at achieving transformative and systemic change for lasting, sustainable impact. This may include addressing transboundary and regional issues, and include the role of trade in energy products, especially renewable energy ones. To realize this vision, we need more than just good intentions; we need strategies in action. These are our accelerators.

1. **Market Development:** Aiming to generate a quality pipeline of bankable projects contributing to enabling the required increased annual investment in energy access and developing innovative de-risking mechanism, financing and business models to attract additional investments to achieve universal access and accelerate a just transition.
2. **Thought Leadership:** Systemwide changes by bringing together the best ideas from government, business, people, communities, and civil society, the SEH is supporting country offices and partners through.
3. **Digital Intelligence**: Digital tools to enhance energy planning, project preparation, investment mobilization and result tracking.

These are not mere concepts; they are engines propelling our vision forward. Thought Leadership isn’t just about knowledge; it’s about pioneering policies, shaping narratives, and catalysing policy changes that reverberate across nations. Market Development isn’t just about transactions; it’s about transforming local economies, fostering entrepreneurship, and bringing clean energy solutions within reach of communities. Digital Intelligence isn’t just about data; it’s about informed decisions, precise planning, and maximizing our impact in the most efficient way possible.

THOUGHT LEADERSHIP

DIGITAL INTELLIGENCE

MARKET DEVELOPMENT

**Sustainable Energy Academy** to provide countries with tailored capacity.

**UNDP Sustainable Hydrogen Support**

Facility for Country Office support

**The Decarbonization Tool** to support national governments with long-term planning for a just energy transition.

**Innovative Energy AI** tool to support governments and policy maker at country level.

**Energy Access Pipeline Accelerator** to close the energy access gap.

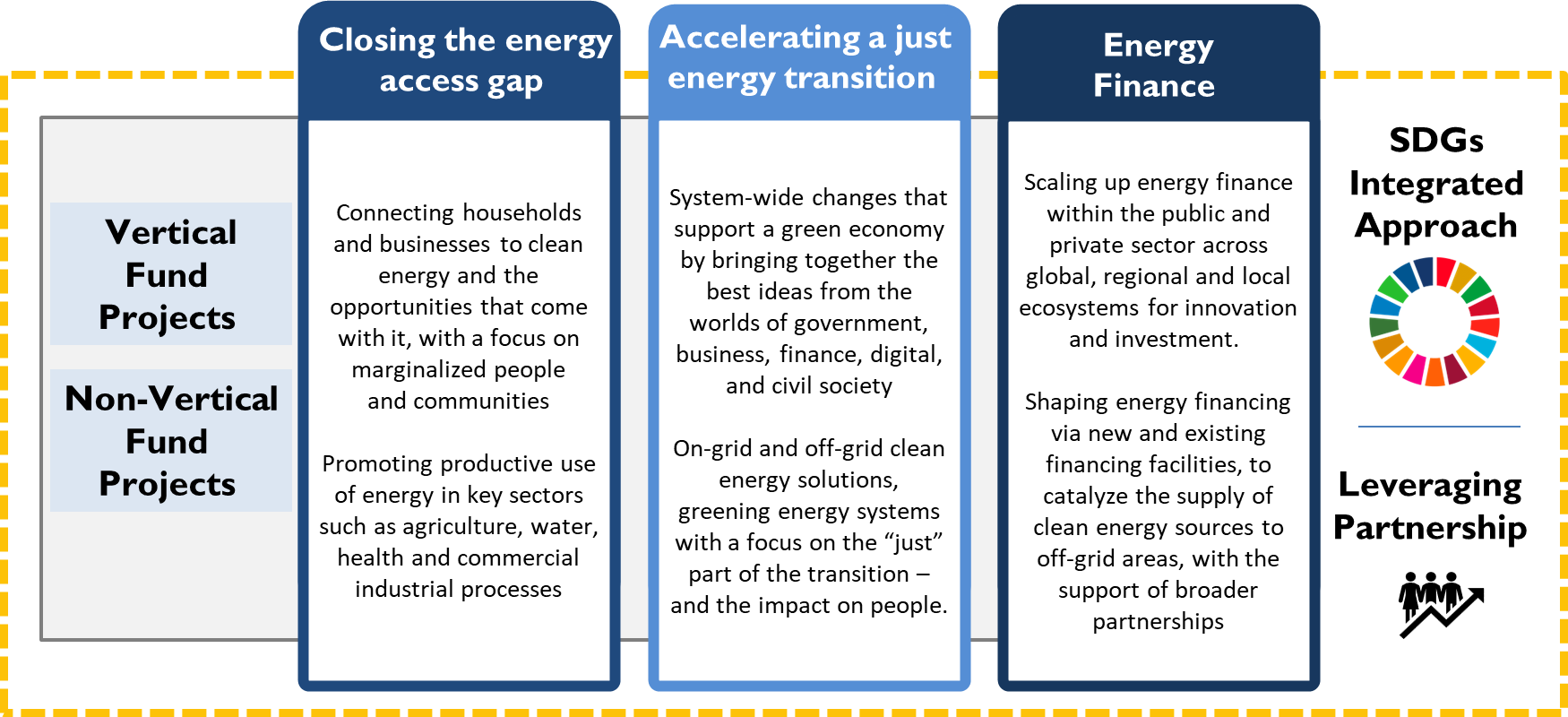
**Market Development Facility** to strengthening the Distributed Renewable Energy Ecosystem

## b. UNDP’s Energy Portfolio

**UNDP is taking a multi-pronged and agile approach to provide energy access and accelerate the energy transition** – working with a global network of partners and stakeholders from across governments, the private sector, civil society, and the international development community. We have crafted a whole-of-UNDP effort, bringing together our network of 170 UNDP Country Offices, regional bureaux; and leadership, technical talent, and expertise from around the world.

**UNDP is driving numerous initiatives to commit the energy moonshot. UNDP active portfolio includes 320 energy related projects in 118 UNDP COs.** This analysis will consider UNDP’s work on energy within the period of the UNDP’s Strategic Plan 2022 – 2025. UNDP energy portfolio comprised:

* **Vertical Fund projects**: with 104 projects in 72 countries. This is made up of US$ 512 million worth of grant funding. The Vertical Fund is also leveraging US$ 5 billion in co-financing from partners across public and private sectors.[[1]](#footnote-2)
* **Non-Vertical Fund**: UNDP has over 159 non-vertical fund energy related projects active across 75 countries.[[2]](#footnote-3)

Projects are supporting energy access efforts through renewable electrification and energy-efficient cooking and demonstrate local efforts to reduce fossil fuel reliance for both household and commercial activities. This includes a range of implementation projects from on-grid and off-grid renewable electricity (e.g., biomass electricity generation, solar mini grids, and micro-hydro), solar home systems (including productive use appliances), to clean cooking, offering policy support to governments, capacity development for public and private sectors as well as e-mobility.

# **2. Methodology**

## a. Approach

**To strengthen UNDP's internal monitoring mechanisms on collective progress towards the energy moonshot, the Tracker analysis aims to identify the number of beneficiaries, both direct and indirect, for all UNDP energy projects active under the UNDP Strategic Plan for the period 2022-2025.**

The Sustainable Energy Hub is leading an effort to track the portfolio of UNDP energy-related projects to develop a picture of where investment is being directed and what benefits are being addressed globally. This is the first time that we have a detailed mapping on Vertical and Non-Vertical Fund projects. A methodology has been developed to convert project outputs into a quantification of indirect and direct beneficiaries. The portfolio of project outputs has been collated from inputs from the **130 UNDP COs**, and an effort is underway to clean up this data to prepare it for conversion based on the proposed methodology.

This operation is essential to:

1. **monitor the achievement of UNDP energy moonshot** counting the number of beneficiaries, direct and indirect, but also to support UNDP Country Offices (COs) and UNDP as whole to have access to global data in the field of energy for development.
2. **link the work on UNDP with partners for a collective effort** to achieve the energy moonshot.
3. **align the energy moonshot with the other moonshot** and identify areas of connection to work together with an integrated approach.

Within this context, SEH has developed its own methodology for extracting outputs and beneficiaries from all UNDP projects:

1. **Analysis of energy project documents**. The first step in this exercise was to manually go through every project document and reported metadata for every project in ATLAS and PIMS+ that had any energy component.
2. **CO validation**. The second step was then to work directly with each of the 130 COs to provide detailed output-level information for all energy-related projects. Beyond the initial inputs, we are still collaborating with each CO to provide clarifications and updates to make sure every output has complete and structured information.
3. **Data Cleaning**. Once information from each CO was completed, the SEH then processes this information by confirming each value is aligned with our proposed methodology, as well as adding several metadata points include taxonomies to provide additional dimensions of analysis to the outputs.
4. **A picture containing text, screenshot, font, number

   Description automatically generatedA diagram of a project

   Description automatically generatedApplication of the Methodology**. This information is passed through the methodology to convert outputs to quantified numbers of direct and indirect beneficiaries, across several tiers and categorizations. This methodology is based on a literature review of other development agencies including World Bank, WHO, Adaptation Fund. We are currently in the process of peer reviewing the methodology

## b. Types of Energy Beneficiaries

Measuring the number of people that benefits from energy intervisitation is challenging and requires a complex process involving data collection and validation. This analysis aims to monitor the tracking progress of UNDP’s energy moonshot by counting the number of people of UNDP’s energy projects, VF and Non-VF energy related activities.

To identify the number of beneficiaries, the methodology has been developed in line with the Corporate Level Indicator of the **signature solution on energy** of the **UNDP Strategic Plan 2022 – 2025.** The output indicator related to energy are:

1. 5.1.1 - **Number of people, who gained access to clean, affordable and sustainable energy:**
2. Female
3. Male
4. Sex-disaggregated data unavailable

This indicator tracks the results of UNDP supported interventions that promote access to affordable and sustainable energy. This includes UNDP supported interventions either directly promoting energy access (e.g. through investments that support improved energy access, use of renewable energy technologies and/or promote energy efficiency) or indirectly promoting access (e.g. by supporting policy development, capacity building, and/or removing barriers to private and public investment in modern and sustainable energy access solutions and energy efficiency).

To have a comprehensive categorization of the beneficiaries, in this methodology, we have identified more specific categories for direct and indirect beneficiaries as the reported in the table below.

The **direct number of people** who gain access to clean, affordable, and sustainable energy, includes**:**

* Clean Electricity
* Clean cooking services
* Installed renewable energy capacity.

The **indirect number of people** who gain access to clean, affordable, and sustainable energy, include:

* Enabling financial ecosystem
* Small Enterprises development
* Medium Enterprises development
* Capacity Building Trainings
* Entrepreneurship Training
* Campaign Participant
* Policy and Regulatory Framework

1. 5.1.2 - **Number of people, who benefitted from services from clean, affordable and sustainable** energy:

a) Female

b) Male

c) Sex-disaggregated data unavailable

This indicator tracks the results of UNDP supported interventions that enable or improve services and productive use of energy from clean, reliable, affordable and sustainable energy either directly (e.g., through investments that enable or improve services of social infrastructure such as clean electricity for schools or health facilities, or productive use of electricity such as solar irrigation) or indirectly (e.g., supporting policy development, capacity building, and/or removing barriers to private and public investment in clean, reliable, affordable and sustainable energy solutions and energy efficiency for social infrastructure , productive use of electricity and other services).

To have a comprehensive categorization of the beneficiaries, in this methodology, we have identified more specific categories for direct and indirect beneficiaries as the reported in the table below:

The **direct number of people** who gain gained access to clean, affordable, and sustainable energy, includes**:**

* Agricultural Services
* Health Services
* Water Services
* Education Services

The **indirect Number of people** who gain gained access to clean, affordable, and sustainable energy, include:

* Energy Efficiency services
* Transportation and e-mobility services
* Energy Infrastructures services

|  |  |
| --- | --- |
| **5.1.1 Number of people, who gained access to clean, affordable, and sustainable energy  (access to clean affordable and sustainable energy)** | |
| **Direct number of people who gain gained access to clean, affordable, and sustainable energy** | |
| Clean Electricity | Number of people who gain access to clean electricity (direct access to electricity, lighting, heating, cooling etc.) |
| Clean cooking services | Number of people who gain access to clean cooking (direct access to clean cook stoves, clean fuels, biomass, etc.) It is assumed that each cook stove will serve one household.[[3]](#footnote-4) |
| Installed renewable energy capacity | Number of people who gain access to energy through installed clean energy capacity (solar PV, hydro, wind, etc.). The number of beneficiaries is calculated based on estimates of household consumption.[[4]](#footnote-5) |
| **Indirect Number of people who gain gained access to clean, affordable, and sustainable energy** | |
| Enabling financial ecosystem | Number of people who gain access to innovative financial mechanism such as pay-as-you go, RBF, etc. |
| Small Enterprises development | Number of people who benefits from the support for the development of small enterprises in the energy transition market. The average size of small enterprises is estimate for each country. |
| Medium Enterprises development | Number of people who benefits from the support for the development of medium enterprises in the energy transition market. The average size of medium enterprises is estimate for each country. [[5]](#footnote-6) |
| Capacity Building Trainings | Number of people who benefits from training for enterprises on the energy business. |
| Entrepreneurship Training | Number of people who have been supported with capacity-building workshops |
| Campaign Participant | Number of people who participate in energy campaign |
| Policy and Regulatory Framework | Number of people supported by policy and regulatory framework development on clean, affordable, and sustainable energy |
| **5.1.2. Number of people, who benefitted from services from clean, affordable, and sustainable energy  (access to productive use of energy)** | |
| **Direct number of people who benefitted from services from clean, affordable, and sustainable energy** | |
| Agricultural Services | Number of people who gain access to clean, affordable, and sustainable electricity (direct access to electricity, lighting, heating, cooling etc.) |
| Health Services | Number of people who gain access to clean cooking solutions (direct access to clean cook stoves, clean fuels, biomass, etc.) It is assumed that each cook stove will serve one household.[[6]](#footnote-7) |
| Water Services | Number of people who gain access to energy through installed clean energy capacity (solar PV, hydro, wind, etc.). The number of beneficiaries is calculated based on estimates of household consumption.[[7]](#footnote-8) |
| Education Services | Number of people who gain (including students, teachers, etc.) access to education services through clean energy systems |
| **Indirect Number of people who benefitted from services from clean, affordable, and sustainable energy** | |
| Energy Efficiency services | Number of people who benefits from energy efficiency interventions (e.g., building efficiency, etc.) |
| Transportation and e-mobility services | Number of people who benefits from transport and e-mobility interventions (e.g., electric vehicles, charging stations, etc.) |
| Energy Infrastructure services | Number of people who benefits from energy infrastructure interventions. |

## c. Process

### i. Analysis of VF and Non-VF Project Documents

The following steps were taken in order to identify and measure the size of the UNDP’s energy portfolio:

1. Map energy-related projects available in Transparency Portal (Atlas)/PIMS+ based on
   * 1. keyword searching (e.g., ‘energy’, ‘energia’, ‘clean cooking’, ‘grid’ either in its title, output, output description),
     2. SDG7 tagging,
     3. CPD output linked to the Signature Solution ‘energy’ and
     4. EITT technical area (Energy Infrastructure Transport and Technology). The project is identified as ‘energy-related’ project if at least one of the above criteria is true.
2. Validate the initial list of identified energy-related projects by checking the project information (e.g., project description available) and double-checking ‘active’ status (e.g., defined as ‘hard pipeline’, ‘under implementation’, ‘approved/endorsed’).
3. Review all project documents available: key documents include the Project Document (ProDoc), Country Programme Document (CDP), Annual Performance Reports (APR)/Project Implementation Reports (PIR), Mid-term and Final Evaluation, etc.
4. A verification process was developed to validate the list of projects identified as energy related.

### ii. CO Validation of project outputs and beneficiary results

To ensure the accuracy, reliability and consistency of the data, a validation process of the data have been conducted. For all VF and Non-VF funded projects in the UNDP Portfolio, the SEH worked with each CO to compile and review energy-related outputs. A full database of all the energy projects has been created containing data divided by each country.

### iii. Data cleaning

The data cleaning process consists of review of the inputs provided by the COs. The outputs of each project has been analyzed ensuring that the information are consistent with the analysis to apply the methodology of converting the outputs into number of beneficiaries.

### iv. Application of methodology to convert outputs to beneficiaries.

A methodology has been developed to convert project outputs into a quantification of direct and indirect beneficiaries. The portfolio of project outputs has been collated from inputs from the UNDP Country Offices (COs).

**Direct beneficiaries** are defined as those who directly benefit from a program initiative, such as households receiving access to electricity, cooking fuels, energy services such as subsidies, training, etc., the number of people was quantified.

To assess the direct beneficiaries, each project output target was identified and measured. These quantities are subsequently multiplied by conversion factors provided by COs and validate on literature review for the specific context.

For some project outputs, the targets are specified already in numbers of beneficiaries, such as individuals receiving direct access to renewable energy, or individuals receiving energy services including in health, agriculture, transport, education, or water.

|  |
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| **Example 1**: This figure is typically obtained from project outputs, such as the number of households provided with improved cookstoves, the number of householders with improved cookstoves and biogas stations, etc. We then multiply this number by the average household size, assuming that one cookstove will improve the quality of life for the entire family in terms of air pollution, time consumption, food security, etc. (source: [WHO](https://www.who.int/data/gho/data/themes/air-pollution/household-air-pollution)). The average household size is validated by the COs, who should have access to the actual numbers. When this information is not available, standard statistics are applied (source: [statista](https://www.statista.com/statistics/183648/average-size-of-households-in-the-us/))  **Example 2**: To calculate the installed capacity for each MW of renewable energy systems (RES), we use data provided by the World Bank's [ESMAP Beyond Connection](https://openknowledge.worldbank.org/server/api/core/bitstreams/248a7205-e926-5946-9025-605b8035ad95/content) report:  Number of Households = Daily Electricity production / daily household consumption.  Daily Electricity Production is assumed to be the daily generation of a PV minigrid or solar home systems. Daily Household Consumption is assumed to be the daily consumption in developing countries. In the ESAMP methodology, it refers to Tier 2 or 3, with a range between 1 and 3.4 kWh/daily/per HH.  **Example 3**: This number is derived from project outputs, such as the number of health facilities accessed to solar electricity, or the number of health centers benefiting from UNDP solar PV installations, etc. To identify the number of beneficiaries, we asked COs for an estimate of the number of people benefiting from each health facility. When this information is not available, we rely on the data of the number of hospital beds per country published by the WHO. |

**Indirect beneficiaries** are those individuals who benefit indirectly from the activities of energy initiatives but are not the direct recipients or targets of support. These totals can include, supporting policy development, capacity building, and/or removing barriers to private and public investment in clean, reliable, affordable, and sustainable energy solutions and energy efficiency for social infrastructure, productive use of electricity and other services.

To assess the indirect beneficiaries, projections on the potential impact of the energy activities are estimated, considering the context of each intervention. Indirect beneficiaries are identified through a systematic analysis of the intervention's ripple effects on the local economy, education, healthcare, and social well-being.

**3. Results**

## a. Summary

**In collaboration with all 130[[8]](#footnote-9) COs, we identify 118 countries that have active energy related projects, 936 outputs have been compiled from 320 projects. Based on analysis of all UNDP projects active during the Strategic Plan 2022-2025, the projected outputs indicate a potential over direct access to renewable energy for 45M people, productive use of energy for 34M people million beneficiaries.**

**Evaluating the impact on indirect beneficiaries entails projecting the potential ripple effect of energy interventions. These projections include a "conservative scenario" with 100 M indirect beneficiaries and an "optimistic scenario" with 150 M indirect beneficiaries.**

direct **access** to renewable energy f**45M people**,

productive **use** of energy for **34M people**,

“conservative scenario” with **100M indirect people**,

“optimistic scenario” with **150M indirect people**

**It's important to note that these numbers are currently under review and undergoing the valuation process with COs.**

We are working on a detailed analysis including a breakdown across each tier and category of beneficiaries, as well as analytics across each region, income group, and other country groupings including LDCs, LLDCs, and (closest to my heart as you all know), for SIDS.

**UNDP is driving numerous initiatives to commit the energy moonshot.** UNDP active portfolio includes Vertical Fund and Non-Vertical Fund energy related projects in UNDP COs. This analysis encompasses both Vertical Funds (VF) and non-Vertical Funds projects, including flagship energy initiatives such as AMP, PUDC, and Solar4Health. It also starts to reveal interesting results about project outputs, especially as we investigate the comparison between project budgets and numbers of beneficiaries.

**The areas of energy activities are various**: from energy access efforts through renewable electrification, solar home systems, clean cooking, energy efficiency, e-mobility etc. to de-risking facilities, financial mechanism, and policy support to governments, offering capacity development for public and private sectors.

**But this is not limited to energy and SDG7**. UNDP's SEH has taken a systems approach to sustainable energy transitions, recognizing that they can accelerate progress on multiple SDGs, including health (SDG 3), education (SDG 4), gender equality (SDG 5), decent jobs (SDG 8), sustainable cities (SDG11), and more.

**This leads us to adopt a portfolio approach**, moving beyond single projects and toward systemic solutions away from the fragmented project-based towards a programmatic and policy-based approach that aims at achieving transformative and systemic change for lasting, sustainable impact.

Further in-depth analysis will be provided to analyse results by projects type, energy categories, SDGs link, donors and any relevant energy indicators.

# **4. Discussion and Next Steps**

## a. Next steps for tracker

**A data cleaning pipeline would need to be established to verify this data input**, collaborate with COs to guarantee data completeness and conformity to the data standard, and augment data inputs with additional taxonomies and metadata tags. It is essential to integrate output tracking data standards into ATLAS and PIMS+ reporting for all energy projects, streamlining and automating beneficiaries' analytics processes.

**Moreover, to support and guide the UNDP policy and programming efforts, a Decision-Making Tool will be developed.** This tool aims to facilitate programmatic and strategic advancements, ensuring transparency and action at country level.

**Leveraging UNDP's expertise in innovation, the approach will move away from a fragmented, project-based approach towards a more comprehensive and policy-based strategy**. This shift seeks to achieve transformative and systemic change for lasting, sustainable impact.

## b. Linking with the other UNDP Moonshots

**Integration between all the moonshot tracking will be essential for demonstrating the integrated nature of the UNDP portfolio.** Each moonshot can develop a parallel methodology and set of taxonomies, so reporting at this level will be automated across energy, health, governance, and education. This pipeline would then allow live tracking of beneficiaries across all energy moonshots at a holistic and granular output level. Beyond the programmatic and strategic advancement this will enable, this entire process will drive transparency and action all the way to the project level.

**This leads us to adopt a portfolio approach**, moving beyond single projects and toward systemic solutions away from the fragmented project-based towards a programmatic and policy-based approach that aims at achieving transformative and systemic change for lasting, sustainable impact.

## c. Tracker app

**Providing 500 million more people with access to clean and affordable energy by 2025, and accelerating the transition to renewable energy, demands new ways of working - and new ways of thinking.** Business as usual is not an option. Countries, innovators, and development partners need to have access to the latest tools and technologies to identify, plan, and implement energy projects and policy strategies at scale. To that end, t**he SEH has begun development of an ambitious and cutting-edge tool: the Energy Moonshot AI Data Platform**.

The platform prototype integrates advancements in Artificial Intelligence and geospatial data, providing unrivalled insights and input for new and existing projects on-the-ground. It empowers implementing partners: bringing global innovation to the local level, where energy action is most needed. Large Language Models (the foundation for tools such as ChatGPT) are being refined using project documents and recent publications in the energy sector to provide insights and information in support of technical officers and development actors. Additional automation tools are included to optimize monitoring and communication of progress across UNDP's energy portfolio, including live beneficiary dashboards and automated reporting. Through collaboration with academia, private sector, and implementing partners, this new platform will leverage the most recent advancements in AI to make energy knowledge and insights available at your fingertips to be more effectively integrated into policy and planning.

A screenshot of a computer

Description automatically generated with medium confidence

1. PIMS+ [↑](#footnote-ref-2)
2. Please note that those numbers are under review. Regarding the grant of the non-VF a validation process is undergoing country by country [↑](#footnote-ref-3)
3. The household members are estimated as an average for each country. [https://population.un.org/household/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fpopulation.un.org%2Fhousehold%2F&data=05%7C01%7Cstefano.pistolese%40undp.org%7C759cf63f80b34441e66008db92c55526%7Cb3e5db5e2944483799f57488ace54319%7C0%7C0%7C638265148478866331%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=ZhYejcsS49oZCLT%2FdcV3UVp9280wJwaK7vxRDsgbJls%3D&reserved=0) [↑](#footnote-ref-4)
4. The estimate of the energy consumption is calculated based on the ESMAP Multi-Tier Framework. [Beyond connection: Energy Access Redefined](https://www.esmap.org/node/56715). [↑](#footnote-ref-5)
5. The average members of small medium enterprises are calculated as an average for each country [↑](#footnote-ref-6)
6. The household members are estimated as an average for each country. [https://population.un.org/household/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fpopulation.un.org%2Fhousehold%2F&data=05%7C01%7Cstefano.pistolese%40undp.org%7C759cf63f80b34441e66008db92c55526%7Cb3e5db5e2944483799f57488ace54319%7C0%7C0%7C638265148478866331%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=ZhYejcsS49oZCLT%2FdcV3UVp9280wJwaK7vxRDsgbJls%3D&reserved=0) [↑](#footnote-ref-7)
7. The estimate of the energy consumption is calculated based on the ESMAP Multi-Tier Framework. [Beyond connection: Energy Access Redefined](https://www.esmap.org/node/56715). [↑](#footnote-ref-8)
8. This number refers to COs that have been consulted. The number of countries that have active related energy project is 118. [↑](#footnote-ref-9)