



Measuring what matters in the Energy SDG

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Briefing Paper

The SDG discussions have recognised that access to sustainable energy is crucial for many areas of development as well as for tackling climate change¹. Billions of people worldwide still do not have access to the energy services they need to lift them out of poverty and build sustainable development.

Proposed SDG 7 aims to close this energy gap and “ensure access to affordable, sustainable, reliable, and modern energy services for all”, with targets on universal access to energy, increasing the share of renewables in the global energy mix and doubling the annual rate of improvement in energy intensity.

However, these targets must be sufficiently ambitious to bring about meaningful change and their indicators must be robust and fit for purpose. In other words, they must “measure what matters” and ensure that progress can be tracked through clear milestones.

The proposed targets and indicators

1. **Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services**
 - *Proposed Indicator 1: Percentage of population with electricity access (%).*
 - *Proposed Indicator 2: Percentage of population with primary reliance on non-solid fuels (%).*

We welcome the inclusion of a target for ensuring universal access to affordable, reliable and modern energy services – though this formulation should include “sustainable” and “safe” services to avoid potential conflict with the aims of the overall Energy SDG or with the other climate and health-related SDGs and targets.

However, new ways of defining and measuring energy access are crucial if this target is to result in poverty reduction and development benefits. Communities need a *range* of energy services for their development, from household services, community services such as health clinics and schools and also energy for productive activities such as farming and running micro/small businesses. Current binary definitions of energy access (e.g. *having or not having a household electricity connection and cooking with non-solid or solid fuels*) do not tell us if communities have energy services that are good quality, reliable, affordable and safe enough to be usable.

The [Global Tracking Framework](#) developed for the *Sustainable for Energy for All (SE4ALL)* initiative takes an innovative, “multi-tier” approach to defining access and has been designed to measure progress across the range of attributes of a usable energy service, including quality, affordability, safety and reliability. For this reason, **the indicators for target 7.1 should support adoption of the multi-tier approach.**

¹ The increase in energy supplies required to achieve universal access should not increase the threat from climate change. It is estimated that achieving universal access to energy by 2030 would only increase current global energy demand by an estimated 1% and CO₂ emissions by 0.6%. (Source: International Energy Agency. 2011. Energy For All: Financing access for the poor. In: World Energy Outlook 2011. IEA, Paris).

This will mean that the equity dimension of access can be tracked, ensuring that “no-one is left behind”. In addition, any target for universal access must include a minimum level of meaningful access so that progress can be measured towards this target. For household, productive and community uses, **GTF tier 3** should act as the minimum level of access that can produce real development impact².

GTF tier 4 should be the minimum level of access for cooking, given new evidence from the [World Health Organisation](#) on the devastating health impacts of indoor air pollution from cooking.

Our suggestions of indicators for Target 7:1

- *Indicator 1: Percentage of population with electricity access (%) at least Tier 3 of the Global Tracking Framework.*
- *Indicator 2: Percentage of population with access to a modern cooking solution (%) of at least Tier 4 of the Global Tracking Framework.*

2. Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix

- *Proposed Indicator 1: Renewable energy share in the total energy final energy consumption (%).*
- *Proposed Indicator 2: Enabling legislation and framework for renewable energy production established by 2020.*

The renewables and energy efficiency targets must incentivise sufficient action by 2030 on climate change and support the global transition to socially inclusive, low carbon development. To prevent dangerous global warming, research indicates an annual global rate of improvement in energy intensity (energy/unit GDP) of at least 4.5% is required, along with at least 45% of final energy use coming from renewable energy globally³. Target 7.2 must integrate this level of ambition of renewables and there must also be an indicator to track progress on meeting the target.

Our suggestions of indicators for Target 7.2.

- *Indicator 1: Renewable energy share in the total energy final energy consumption (%)*
- *Indicator 2: “% change from last year, collected at national level then aggregated”*

3. Target 7.3: By 2030, double the global rate of improvement in energy efficiency

- *Proposed Indicator 1: Rate of improvement in energy intensity (%) measured in terms of primary energy and GDP*
- *Proposed Indicator 2: Composite Energy Efficiency Improvement Index built up of sub-indicators measuring transport energy efficiency, industrial energy efficiency, power generation energy efficiency, buildings energy efficiency and agricultural energy efficiency.*

We support the proposed indicator 1, although this could also be measured in terms of market exchange rates (MER). As with the target for increasing the share of renewables, an indicator is also required to track progress.

Our suggestions of indicators for Target 7.2.

- *Indicator 1: Rate of improvement in energy intensity (%) measured in terms of primary energy and GDP*
- *Indicator 2: % change from last year, collected at national level then aggregated*

Finally, the GTF offers a ready-made and robust tool for measuring progress on all 3 energy targets, so long as there are appropriate adjustments to the SE4ALL renewables target to bring it into line with the level of action required for climate protection.

² Tier 3 for household electricity comprises a low but adequate level of electricity which is affordable, reliable and available for eight hours a day, a package of energy services including lighting, phone charging, radio and television and an electric fan, food processing applications or a washing machine. For productive uses, Tier 3 would allow for the use of, for example, a sewing machine, a drilling machine or a potter’s wheel. For cooking, Tier 4 would mean at least the use of a stove which either uses non-solid fuel, or a very high-quality biomass stove which is well-vented.

³ To have a reasonable chance of not exceeding 1.5°C warming, the current fossil fuel-based energy sector has to fundamentally change with the aim of reaching decarbonisation by 2050. See Climate Action Network: <http://www.climatenetwork.org/publication/can-position-energy-and-post-2015-development-agenda-0>.

Means of Implementation targets and indicators

- 1. Target 7.a: By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.**
 - *Proposed Indicator 1: Improvement in the net carbon intensity of the energy sector (GHG/TFC in CO2 equivalents)*
 - *Proposed Indicator 2: Amount of Foreign Direct Investment and Financial transfer for these purposes.*

The inclusion of “cleaner fossil fuel technology” is inconsistent with a coherent framework incentivising the shift to sustainable energy globally and should be excluded from the target and indicators. The most meaningful way of measuring progress on all the 3 targets under SDG7 would be to have indicators on:

- *Total global investment in renewables and % change from previous year*
- *Total global investments in energy efficiency and conservation and % change from previous year*
- *% of national research & development spending on renewables and energy efficiency and % change from previous year*

- 2. Target 7.b: By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries and Small Island Developing States.**
 - *Proposed Indicator 1: Rate of improvement in energy productivity (the amount of economic output achieved for a given amount of energy consumption).*
 - *Proposed Indicator 2: Percentage of international cooperation projects being implemented to facilitate access to clean energy.*

The most meaningful way of measuring this target would be to have indicators on:

- *Total international development and climate finance spent on renewables & energy efficiency and % change from previous year*
- *Total international development and climate finance spent on decentralised energy solutions and % change from previous year*