7 AFFORDABLE AND CLEAN ENERGY

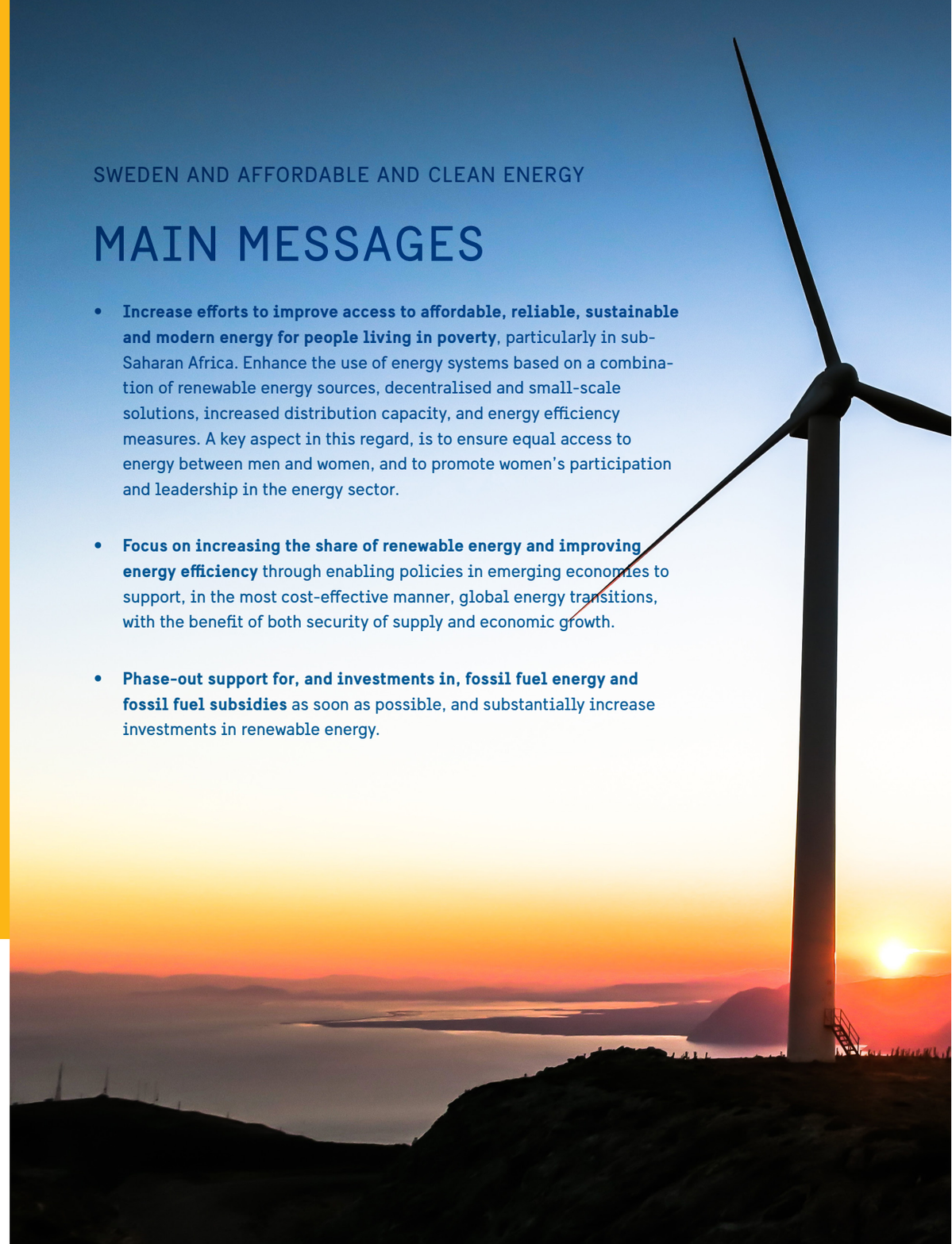
Sweden
Sverige

MAIN MESSAGES

- **Increase efforts to improve access to affordable, reliable, sustainable and modern energy for people living in poverty**, particularly in sub-Saharan Africa. Enhance the use of energy systems based on a combination of renewable energy sources, decentralised and small-scale solutions, increased distribution capacity, and energy efficiency measures. A key aspect in this regard, is to ensure equal access to energy between men and women, and to promote women's participation and leadership in the energy sector.

- **Focus on increasing the share of renewable energy and improving energy efficiency** through enabling policies in emerging economies to support, in the most cost-effective manner, global energy transitions, with the benefit of both security of supply and economic growth.

- **Phase-out support for, and investments in, fossil fuel energy and fossil fuel subsidies** as soon as possible, and substantially increase investments in renewable energy.



SWEDEN ON TARGET FOR SDG 7: DECOUPLING GROWTH FROM EMISSIONS

Sweden at work nationally

It is the Government's ambition that Sweden should be the world's first fossil-free welfare nation, with an energy system based on 100 per cent renewable energy. In 2018, the Government proposed legislation, based on a multi-party framework agreement, on Sweden's long-term energy policy from 2016, consisting of goals for a 100 per cent renewable electricity system, by 2040, and for 50 per cent more efficient use of energy, by 2030. The objective is for Sweden to have zero net emissions of greenhouse gases into the atmosphere by 2045, and thereafter achieve negative emissions.

Today, more than half of Sweden's national energy supply comes from renewables, and the aim is to further reduce greenhouse gas emissions. Energy has links to several of Sweden's environmental objectives, including the environmental quality objectives Clean Air, Reduced Climate Impact and A Good Built Environment. Sweden has the highest proportion of final renewable energy use in the European Union. However, there are major differences between various sectors.

The major energy challenge for Sweden is the transport sector. In an international perspective, although Sweden already has a high proportion of renewable energy use in the transport sector, further measures are needed to decarbonise transport, including increasing the share of electric vehicles and the use of biofuels, and improving transport efficiency through societal planning.

Sweden at work globally

As a part of its international development cooperation, Sweden provides support for interventions in developing countries, mainly in sub-Saharan Africa, to advise on and to promote cost-effective, renewable and low-carbon energy solutions. Support for interventions in the energy sector, which has emissions reduction as a principal objective, amounted to approximately SEK 129 million in 2015. In 2017, Sweden's total development cooperation in support of the energy sector amounted to SEK 547 million (approximately USD 61 million).

Working towards greater gender equality in the energy sector addresses the difference between men and women, in terms of which types of energy they use and how they use it, and how they benefit from services that access to energy offers, such as health care, street lighting and industrial uses.

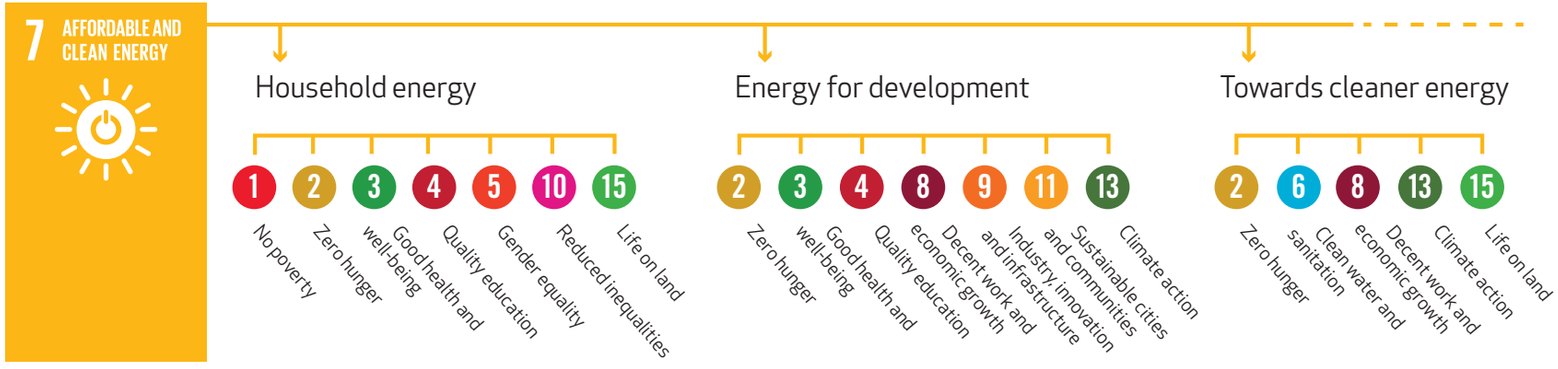
The Swedish International Development Cooperation Agency (Sida) works actively in dialogue with its partners to address the needs of both women and men and proactively seeks to strengthen women's voice and active participation in energy-related decision-making. Awareness of gender aspects in the energy sector has increased and Sida's partners have developed gender strategies for their operational work. Energia[1] is a long-standing partner to Sida that works to mainstream gender equality in energy policies, programmes and projects to empower women to engage in and influence their own situation.

The Swedish Government co-led the launch of the Clean Energy Education and Empowerment technology collaboration programme (C3E TCP) under the International Energy Agency. It is one of the first international programmes to support gender equality, in the energy sector. Promoting women's participation and leadership is about more than justice, equality and appropriate representation; it is also about securing skills for the energy sector's long-term development.

One aspect of Sweden's global involvement in sustainable energy relates to the work of international financial institutions. These institutions play an important role in supporting the energysupply of regions and countries, not least poor countries, and in promoting renewable energy solutions. The Government continues to promote an increased level of ambition, so that energy investments by these institutions will be more climate-friendly and environmentally friendly.

The Government is promoting to phase out subsidies for fossil energy. One example is Sweden's involvement in the Friends of Fossil Fuel Subsidy Reform. Sweden also supports the introduction of pricing for carbon dioxide emissions, in part through participation in the Carbon Pricing Leadership Coalition and by supporting the World Bank's Partnership for Market Readiness and the Transformative Carbon Asset Facility.

Connecting the dots[2]



Source: Stockholm Environment Institute

Implementing SDG 7 involves different sets of challenges for countries and regions, at different stages of development. An estimated 1.1 billion people have no access to electrical power.3 Some 2.8 billion people still rely on systems based on traditional biomass, coal or kerosene for household energy, such as cooking and lighting. Unsustainable use and production of energy can have a negative impact on ecosystems, health and the climate. While high-income regions have achieved universal energy access, this has predominantly been at a high cost to the environment – through, for example, greenhouse gas emissions, local air and water pollution, and high consumption of scarce water resources – due to a dependence on fossil fuels. Evidently, there is a critical need to achieve sustainable energy for all, with a focus on increasing access in developing countries, and continuing to push the transitions to renewables and improved energy efficiency worldwide.

Household energy

Access to affordable modern energy services supports poverty reduction (SDG 1) and contributes to food security (SDG 2) and reduced inequalities (SDG 10) by increasing household productivity. Replacing traditional, small-scale, biomass stoves also reduces indoor air pollution and time spent on gathering fuel, mainly by women and girls, thus improving health (SDG 3) and reducing gender inequality (SDG 5). Electric lighting provides better conditions for children to do homework, after dark, thus contributing to inclusive education (SDG 4). Efficient cookstoves, and switching fuel from unsustainably produced charcoal and fuelwood, also saves money spent on fuel and can reduce ecosystem degradation (SDG 15), thus bringing about changes in economic structures.

Energy for development

Reliable, modern energy is needed to provide essential services, such as quality health care in hospitals and clinics (SDG 3), and better education in schools (SDG 4). Electricity for refrigeration and agricultural uses supports food safety, security and agricultural development (SDG 2). Power is also needed for industrial development (SDG 9), economic growth (SDG 8) and sustainable urbanisation (SDG 11). From this perspective, there are potential trade-offs with combating climate change (SDG 13), if renewables cannot be brought on line quickly enough, at reasonable costs. However, costs of renewables are falling fast and are, in some rural low-income areas, the cheapest option of providing energy access.[4]

Towards cleaner energy

SDG 7 also calls for improving efficiency and substantially increasing the share of renewables in the global energy mix. Renewable energy may have complex relationships with other SDGs. Falling costs have made wind and solar power a disruptive force in many energy markets. Yet, while they can help achieve SDG 13, wind, solar, biomass and especially Hydropower, can also impact landscapes, or Ecosystems, and contribute to deforestation (SDG 15), or displace food production (SDG 2). Recycling organic waste, including in waste water (SDG 6), can provide clean energy sources while reducing methane emissions and pollution. At the same time, the development of bioenergy, solar and wind power is creating many jobs and economic opportunities (SDG 8).[5]

1 http://www.energia.org/
2 This section is based on an analysis by Stockholm Environment Institute. For more information on SEI's SDG work visit the following website: https://www.sei.org/sdgs-agenda-2030/
3 IEA (2017). World Energy Outlook. International Energy Agency: Paris; https://www.iea.org/weo2017/.
4 IEA (2017b). World Energy Outlook Special Report: Energy Access Outlook 2017. International Energy Agency: Paris; http://www.iea.org/energyaccess/.
5 Union of Concerned Scientists (2017). Benefits of renewable energy use. https://www.ucsusa.org/clean-energy/renewable-energy/public-benefits-of-renewable-power#bf-toc-3

Sweden and the transformation towards sustainable and resilient societies

Sweden's transformation towards sustainable and resilient societies is well under way and is taking place throughout the country. More and more people in Sweden say that concern for sustainability affects their consumption decisions. Municipalities and county councils are committed to sustainable development. Large parts of the Swedish business community see sustainability as a competitive advantage. Civil society is paving the way through its own efforts and by pushing decision-makers. Young people are key for transformative change. The Swedish research community contributes cutting-edge research on sustainable development. Many Swedish public agencies have agreed on a joint declaration of intent to implement the 2030 Agenda.

On 14 June 2018, the Swedish Government presented its action plan for implementing the 2030 Agenda during the period 2018–2020. Sweden has the ambition to be a leader in the implementation of the 2030 Agenda. Implementation involves a step-by-step approach towards a modern and sustainable welfare nation at home, and as part of the global system. This transformation must take place jointly, in partnership.

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