

**SNV**

# Accelerating sustainable energy markets

SNV in Energy





# About us

SNV is a not-for-profit international development organisation that makes a lasting difference in the lives of people living in poverty by helping them raise incomes and access basic services. We aim for premium quality and focus on three sectors: agriculture, energy, and water, sanitation and hygiene.

Our team of more than 1,300 staff is the backbone of SNV. With a long-term, local presence in over 25

countries in Asia, Africa and Latin America, we know how governments work and how relationships are built. By applying our know-how, we can deliver impact at scale, through direct results and systems change.

We implement our programmes entirely through project funding awarded by public development agencies, foundations, multilateral banks, governments and the private sector. This requires us to work efficiently,

realise effective solutions and invest in operational excellence every day.

## Investing in energy

In 2018 we had an active portfolio of €85 million. Taking a market-based approach, we use this funding to work with public and private partners in accelerating energy market development for biodigesters, clean cooking and off-grid electricity.

We do this through our **sustainable energy markets** product and through our cross-sectoral products, **climate and business** and **opportunities for youth employment**. We also apply our gender approach – **balancing benefits**.

In 2018, our interventions led to:

**63,000** people with access to biodigesters

**351,000** people with access to improved cookstoves

**203,000** people with access to off-grid solar power



# Global trends in energy

Energy is essential for human development, and the importance of **energy access** was recognised in 2015 at a global level when universal access to energy by 2030 became part of the UN's **Sustainable Development Goals** (SDGs). SNV's work in energy is primarily guided by SDG 7, which aims to achieve universal access to affordable and sustainable energy by 2030.

Energy access also contributes to other SDGs, notably SDG 1 (no poverty), SDG 3 (good health and well-being), SDG 5 (gender equality) and SDG 13 (climate action).

The global use of unsustainable energy sources is a significant cause of **climate change**, with low-income groups being particularly vulnerable. The Paris Climate Agreement requires an energy transition away from fossil fuels – the decarbonisation of the energy system – by embracing renewable energy sources, which after a transitional period are expected to make up most of the world's energy production.

In terms of **financing** for energy access, unfortunately only 50% of the finance needed has been mobilised for electricity access, while a shocking 5% has been mobilised for clean cooking. As per International Energy Agency projections, providing electricity for all by 2030 would require an annual investment of US\$ 52 billion for a mix of grid extensions, mini-grids and off-grid solutions. The annual requirement for clean cooking is US\$ 4 billion.

Also, due to climate change and conflicts, by the end of 2017 there were 40 million internally **displaced people**. Developing regions host 85% of the world's refugees under the United Nations High Commissioner for Refugees mandate. Access to clean energy is crucial in humanitarian settings, as most food aid distributed to refugees needs to be cooked.

On the positive side, since 2012, **renewables** (34% of new connections) have made big strides, as have off-grid and mini-grid systems (6% of new connections). This shift is expected to accelerate because of

the declining costs of renewables, efficient end-user appliances and innovative business models for access. Investments in certain sub-sectors, such as pay-as-you-go (PAYG) solar home systems, also show promising growth.

We are also seeing new opportunities for **renewable energy in agriculture**. Around a fifth of the total annual global greenhouse gas emissions are caused by the food sector (without including emissions due to land use change).<sup>1</sup> The main challenge for this sector is to decouple fossil fuel energy inputs from the increasing demands for food supply while ensuring food security.

<sup>1</sup> Sims, R., A. Flammini, M. Puri and S. Bracco, 2018. *Opportunities For Agri-Food Chains To Become Energy-Smart*. FAO, Rome.



# Our targets for 2019–2022

In the new strategy period of 2019-2022, we will scale up and achieve an improved quality of life through clean energy access for **5 million people while reducing 5 million tonnes of greenhouse gas** emissions. Specifically:

**585,000 people**

will gain access to biodigesters, providing clean cooking and a powerful organic fertiliser



**2.5 million people**

will gain access to clean cooking and heating through improved or advanced cookstoves and sustainable fuels

**1.9 million people**

will gain access to off-grid electrification, through household solar PV and mini-grids



**5 million tonnes**

of greenhouse gases will be reduced

**250,000 young women and men**

will benefit from improved (self) employment



# Our approach

SNV in Energy's ambition to directly impact the lives of 5 million people requires a market-based approach that incorporates **impact at scale**, leveraging finance and systems change.

**Leveraging finance** can grow our results. SNV in Energy's projects leverage finance from:

- Energy users for the purchase of products and services;
- Enterprises through equity, loans, results-based financing schemes or challenge funds;
- Financial institutions (banks and commercial investors) investing in SNV-supported renewable energy;
- Carbon buyers through carbon credits; and
- The public sector (national or local governments) investing in SNV-supported renewables.

We continue to engage in project-level partnerships with financial institutions. To maximise leveraging finance, SNV wants to build financial capacity, and investigate using reserves to take limited financial risk in projects through loan or guarantee components.

We contribute to systems change in countries in the medium or long term by transforming energy systems not only through our **sustainable energy markets** product but also by building youth-enabling ecosystems and policies through its **opportunities for youth employment** product.

An effective response to **climate change** requires an integrated approach across sectors to promote combined mitigation and adaptation solutions. We thus aim to go beyond access alone and focus on the **productive use of energy**.



# SNV energy products and strategic focus

SNV energy supports the energy transition and SDG 7 with its globally applied **sustainable energy markets** product along with its **climate and business** and **opportunities for youth employment** products.



## Sustainable energy markets

Our work on biogas markets applies our decades-long expertise to specific local market conditions. We have also established a track record in introducing improved cookstoves and off-grid electrification solutions.

Our approach is anchored in market research. Based on our local knowledge and as appropriate, we combine demand creation, technical and business advice for entrepreneurs, incentives to distribute quality products, support to government agencies to run market-based energy programmes and advice to improve enabling environments.

We offer early-stage grants and results-based financing to help de-risk commercial investments and incentivise companies to engage in underserved areas. Alongside all these, we advocate for more funding

for decentralised energy services, for the removal of regulatory barriers to make the energy sector more attractive to business investors, and for national quality standards.

Our sustainable energy markets product develop energy markets for biogas, clean cooking and heating, as well as for off-grid electricity. Three premises underlying the sustainable energy markets product are:

1. Achieving universal access to energy in a sustainable manner requires **a broad and comprehensive market approach**. SNV brings together investments in demand, supply, financing, quality and the enabling environment. Our product contributes to three objectives: achieving direct impact, leveraging finance and enabling systems change (by transforming energy markets).
2. Whereas on-grid energy is

primarily managed by the public sector, **off-grid energy is primarily led by the private sector** with governments in an enabling role. In SNV's sustainable energy markets product, all actors are strengthened in their respective roles. Governments are supported in enabling legislation (energy planning) and regulations (imports, quality, feed-in tariffs). Companies are stimulated to grow their business and deliver good-quality products. Financial institutions are encouraged to increase lending and end-users are supported in awareness and choice.

3. Markets, by themselves, do not ensure that no one is left behind. SNV therefore makes a targeted effort towards **equity in gender and inclusion** by including low-income end-users, marginalised communities and remote regions within countries, as well as stimulating women entrepreneurship, employment and leadership.

## Strategic priorities

### Leveraging finance

The **sustainable energy markets** product helps to leverage finance from end-users, companies, financial institutions and carbon buyers.

- **Results-based financing (RBF):**

We implement RBF schemes to leverage, de-risk and catalyse commercial investments. RBF does more than mobilise private capital. It provides incentives for enterprises to manage projects effectively, promotes nascent markets, builds public support by paying for success rather than failure and stimulates market development in remote areas and vulnerable communities.

- **Carbon credits:** We have successfully mobilised carbon funding for biogasifiers and improved cookstoves. We will continue to do so as it provides a long-term sustainable funding source for continued investments in the energy sector.



- **Early-stage grants:** We continue to provide early-stage grants and technical assistance through challenge funds or other mechanisms that de-risk investments and leverage company investments.
- **Partnership with financial institutions:** SNV trains financing entities on the risks and benefits of energy solutions, as well as in setting up specific financing schemes, including PAYG.



### 'Use' and 'productive use'<sup>2</sup>

Access to energy technologies does not automatically result in productive use of energy and income generation activities. To develop the latter on a wider scale, SNV integrates specific support such as tailored technical assistance and financial support or market research in our energy projects. The productive use of energy may well be a game changer for investors: it provides the prospect of commercial viability of investments in solar energy and mini-grids. In the coming years, we will increasingly stimulate the productive use of improved cookstoves, solar home systems and mini-grids.

### Leaving no one behind

SNV supports **an energy transition that leaves no one behind**, including those in remote areas and poor and vulnerable market segments, as well as refugees and other displaced communities. Methods to ensure **inclusion** are selecting low-income districts, communities or informal settlements as working areas (as we do in Kenya and Tanzania),

providing incentives to companies for sales to low-income households and increasing affordability through PAYG or other credit and payment solutions. Other ways of ensuring inclusion is to target community-wide coverage, to include households and local businesses.

Youth and women-focused initiatives are described below.

### Integrating solutions

Going beyond specific technologies, SNV focuses on services required in response to consumer demand, including integration of these services. For example, we work with PAYG solar companies that integrate clean cooking solutions as well as productive applications such as water pumping for irrigation. In clean cooking, we look beyond cookstoves, considering fuel supply chains, cooking energy systems (kitchen set-up) and interventions in cooking habits (use of cookstoves and fuels, behavioural change communication) that in many cases are essential elements to achieving the desired impact.

## Balancing benefits for gender equality

Both in energy and agriculture, SNV applies its **balancing benefits** approach. Balancing benefits consists of actions to address gender issues through empowerment and transformational change in gender relations. By increasing the share of household income controlled by women, SNV contributes to changes in spending in ways that benefit the family, positively affecting future generations. SNV helps women to grow their businesses and promotes the inclusion of women in energy supply chains, for example as sales agents or technicians, in management or administrative positions.

<sup>2</sup> Terrapon-Pfaff, J., M.C. Gröne, C. Dienst and W. Ortiz, 2018. *Productive use of energy – Pathway to development?* Wuppertal Institute for Climate, Environment and Energy. Productive use is defined as 'utilization of energy – both electric, and non-electric energy in the forms of heat, or mechanical energy – for activities that enhance income and welfare'.



## Opportunities for youth employment

Our youth employment portfolio is growing rapidly with a major focus on fostering (self) employment and entrepreneurship for youth in the energy, agriculture and WASH sectors. For this, we implement our **opportunities for youth employment** product, which uses a market-based approach to (self) employment.

The renewable energy sector provides ample opportunities for young men and women to set up businesses in cookstoves, biodigester or solar and related appliances. Alternatively, they are trained and employed by existing companies, often as technicians and sales agents or in related ICT businesses.





## Climate and business

Our **climate and business** product cuts across agriculture and energy. It builds on our expertise in working with the private sector to accelerate the adoption and scaling of climate-smart business practices that build productivity.

This includes the integration of renewable energy and energy efficiency solutions along agriculture value chains – in production (for example, with solar powered irrigation), post-harvest storage (for example, cooling using renewable energy) and processing (for example, drying, milling, etc). This reduces the vulnerability of small- and medium-sized enterprises, farmers and households to the impacts of climate change and helps them to increase productivity.

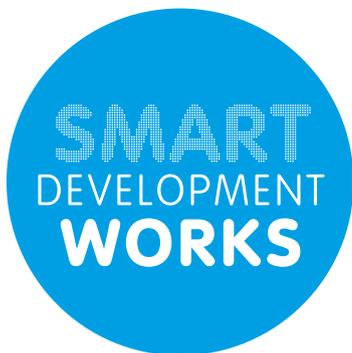
SNV helps companies better understand and internalise climate risks into their business operations; we also help companies offer goods and services needed as a result of climate change.

We bring together value-chain actors, authorities, research partners and investors to develop knowledge and accelerate the adoption of climate-smart practices.

We also help actors along the value chain to develop business cases and support them in accessing financing.

Finally, we use evidence-based advocacy to support the development of conducive policies and legislation.





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