**Norad Clean Energy Portfolio**

**Theory of Change**

Norad is dedicated to enhancing global energy access through its renewable energy interventions, emphasizing the expansion of electricity and clean cooking technologies.

The Theory of Change (ToC) offers a structured approach to guide Norad's interventions, demonstrating how inputs lead to outputs, which then translate into outcomes and lasting impacts. Grounded in evidence from both academic and practitioner perspectives, the ToC acts as a blueprint for Norad's support. The ultimate aim is to reduce poverty and inequality in a green world, by fostering sustainable economic development which improves living conditions and welfare, while at the same time promoting climate, environment and nature. The focus of the interventions is in low-and lower middle-income countries (LLMICs), particularly Sub-Saharan Africa.

**Problems/Challenges to be addressed**

Norad’s ToC aims to address multiple interlinked challenges. These include the persistent lack of access to electricity in many regions, particularly pronounced in rural areas and among the base of the economic pyramid. Similarly, there exists a widespread reliance on polluting cooking methods, which contribute to health issues and environmental degradation. Also, there is concern as economies develop and energy needs grow that greenhouse gas emissions will increase dramatically if renewable energy cannot be generated at scale. To stem these challenges, there is a shortage of both public and private investments in the energy sector, which is necessary to fund the expansion and improvement of energy infrastructure. Compounding these issues is the lack of institutional capacity, including in energy system planning, which hinders the development of comprehensive, sustainable, and long-term energy solutions. As a result, governance and regulatory frameworks in many countries are currently inadequate to foster sustainable energy development, often leading to inefficiencies and delays in achieving energy goals.

**Narrative theory of change**

The interventions are built upon essential resources and capabilities, which serve as inputs to effect the subsequent ToC stages. Financial support (grant financing, results-based finance, risk mitigation) is channelled into expanding energy infrastructure, including both grid-based and off-grid solutions, as well as advancing clean cooking technologies. Technical and transactional assistance expertise is mobilized to design, implement, and scale projects effectively. Energy sector improvement and reforms are supported by means of capacity building and twinning arrangements with partner governments.

These inputs lead to concrete, measurable outputs. This includes fostering business development by contracting service providers, getting projects to financial close, or commissioning foundational work for future actions through feasibility studies and environmental and social impact assessments. Human capital development is another key output, pursued through offering workshops, seminars, and trainings to a range of stakeholders, including public institutions and private sector actors. Additionally, the evidence/information base for energy sector development is strengthened through preparatory research, studies and reports. Effective regulations and policies are crafted with the support of partner governments, in an effort to enhancing governance frameworks. Finally, strategic partnerships and policy dialogue are reinforced to create a favorable environment for energy interventions, ensuring Norwegian support is strategically aligned.

These outputs lead to anticipated outcomes that more directly benefit the beneficiary population and other relevant stakeholders. One key set of outcomes is the installation of on-grid renewable energy generation capacity, the strengthening of electricity networks, and the expansion of markets for off-grid electricity and clean cooking solutions, all contributing to a more accessible and robust energy landscape. This is accompanied by the successful leveraging of additional new private and public financing. Moreover, there is an improvement in capacity for power trade, enabling improved regional energy integration.

Building on these, a second tier of outcomes follow. An increased share of renewable energy supply leads to an avoidance of greenhouse gas emissions, aligning with climate targets. Target populations gain improved access to electricity and clean cooking technologies. Finally, the strengthening of institutions and the improvement of governance and transparency in the energy sector establish a solid foundation for sustainable and long-term policymaking in the sector.

Ultimately, the impacts of Norad’s energy initiatives align with the agency’s mission to reduce poverty and inequality through sustainable economic development. Access to affordable electricity will enable small, medium and large enterprises to grow through increased productive use of electricity. As such, reliable and affordable energy access acts as a catalyst for socioeconomic welfare, enabling more productive activities, creating jobs, extending working hours, and improving income levels. Health benefits emerge from reduced air pollution, while educational outcomes improve as better lighting increases learning hours and school quality. Gender equality is advanced by reducing the time women and girls spend on household chores, allowing them greater participation in education and economic activities. Environmental benefits are realized through the transition to renewable energy, which reduces greenhouse gas emissions and curbs deforestation.

**Assumptions**

Moving from one element of the theory of change to the next hinges on several critical assumptions across the ToC stages. Transitioning from inputs to outputs relies on the availability of substantial financing, a challenge that remains considerable. It is further assumed that this financing can be effectively absorbed within the local contexts and is utilized to its full potential. Further, program designs must be well-suited to the needs of the communities they aim to serve, ensuring that energy supply aligns with demand. Furthermore, effective knowledge-sharing and policy dialogue are essential to enhance the regulatory environment, making it more conducive to attracting investments. Inputs must also be demand-driven and well-coordinated with other initiatives to maximize their effectiveness.

Moving from outputs to outcomes necessitates that any funding mobilised is utilised effectively. Further, for access modes for electricity—whether on-grid or off-grid—and clean cooking solutions to benefit users, effective adoption is required. For capacity development to be fruitful, it is crucial that the emerging private sectors in renewable energy and clean cooking are capable of integrating local human capital into their value chains. On the public sector side, capacity building prerequisites public institutions to possess sufficient absorptive capacity to support and manage reform agendas and changed policy environments. The transition of the energy landscape must also have local support, necessitating a political economy in partner countries that is adaptive and open to change.

For outcomes to result in impacts that align with the SDGs, the increased use of electricity and clean cooking are assumed to have tangible effects on beneficiaries’ livelihoods. One key assumption is that increased use of electricity and clean cooking leads to a shift towards better income-generating activities, whether through improved employment opportunities or more productive self-employment. Businesses are expected to benefit from enhanced electricity access, allowing them to expand their operations. Electrification is also anticipated to extend and improve leisure time. Better and longer home lighting hours is expected to increase study hours for school children and lead to improved educational outcomes. Increased electricity use is assumed to lead to more effective public healthcare services and improved health within households. It is assumed that targeted interventions will empower women and girls, contributing to gender equality. Finally, the transition to clean energy and cooking practices is expected to effectively replace traditional, polluting methods and not lead to rebound effects.

In conclusion, Norad’s Theory of Change for its clean energy portfolio provides a strategic framework to increase energy access and renewable energy generation, and strengthen institutions, thereby addressing key socio-economic, health, gender, and environmental challenges. By effectively leveraging financial resources, technical expertise, policy support, and continuous learning, Norad aims to deliver impactful and sustainable energy solutions that improve lives and foster development in the regions that need it most.

*Source reference: Evidence mapping*