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Office of the Auditor General of Norway

The Office of the Auditor General's investigation of Norwegian development assistance to clean energy

Document 3:12 (2013–2014)

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The Office of the Auditor General's investigation of Norwegian development assistance to clean energy

Document 3:12 (2013–2014)

To Stortinget (the parliament)

The Office of the Auditor General hereby submits Document 3:12 (2013–2014) *The Office of the Auditor General's investigation of development assistance to clean energy*.

The Office of the Auditor General, 25 June 2014

For the Board of Auditors General

Per-Kristian Foss
Auditor General

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Ministry of Foreign Affairs

The Office of the Auditor General's investigation of Norwegian development assistance to clean energy

Development of energy services is an important input factor in combating poverty. An important goal of Norwegian development work is to reduce absolute poverty and lift people out of poverty on a lasting basis. In Recommendation No. 93 (2004–2005) to the Storting, the Standing Committee on Foreign Affairs stated that sustainable development and renewable energy will be important themes in Norwegian development cooperation in the years ahead.

NOK 12.26 billion was spent on development assistance to clean energy in the 2000–2013 period. The focus on clean energy in development cooperation has been building since the mid-2000s, and in 2007 the Ministry of Foreign Affairs launched the *Clean Energy for Development Initiative.* NOK 8.97 billion was appropriated for clean energy projects in 2007–2013.

The clean energy initiative supports the development of renewable power generation and power grids, poverty-related measures such as rural electrification with solar energy, and capacity building. The development of power plants and grids requires major investments and it has long been a goal for the Ministry of Foreign Affairs to spur private investments.

The objective of the audit has been to assess to what extent Norwegian development assistance to clean energy is in line with the Storting's goal of improving access to sustainable energy services in order to stimulate economic growth and better living conditions for the poor.

The audit mainly comprises the clean energy development assistance provided to the seven core countries: Ethiopia, Liberia, Mozambique, Nepal, Tanzania, Uganda and East Timor. During the audit period 2000–2013 these countries received about NOK 3.9 billion in development assistance to clean energy.

The audit is also based on the following decisions and intentions of the Storting:

- Recommendation No. 93 (2004–2005) to the Storting for Report No. 35 (2003–2004) *Fighting Poverty Together*
- Recommendation No. 269 (2008–2009) to the Storting for Report No. 13 (2008–2009) *Climate, Conflict and Capital*
- Recommendation 44 S (2011–2012) to the white paper Towards greener development (Meld. St. 14 (2010–2011))
- Budget recommendations to Proposition No. 1 to the Storting/Proposition 1 S for the Ministry of Foreign Affairs in 1999–2014

The report was submitted to the Ministry of Foreign Affairs in a letter dated 1 April 2014. The Ministry commented on the report in a letter dated 29 April 2014. Most of the comments have been incorporated in the report and this document.

The report, the Board of Auditors General's cover letter to the Ministry of Foreign Affairs dated 20 May 2014 and the Minister's reply dated 3 June 2014 are enclosed as appendices.

1 Key Findings

- Norwegian development assistance has contributed little to increase access to clean energy:
  – The aid has led to little increased renewable power generation in the core countries.
  – The Ministry of Foreign Affairs lacks sound policy instruments to spur private investments in countries with weak framework conditions.
  – Norwegian-supported initiatives for developing power grids have weak economic sustainability.

- Development assistance to clean energy has reached the poorest to a marginal degree.

- Weaknesses in planning capacity-building projects cause implementation problems.

- The Ministry of Foreign Affairs' inadequate planning and decision-making basis weakens its ability to manage aid effectively.

2 The Office of the Auditor General's comments

2.1 Norwegian development assistance has contributed little to increase access to clean energy

2.1.1 The aid has led to little increased renewable power generation in the core countries

The Standing Committee on Foreign Affairs has pointed out that the development assistance to clean energy is to be aimed at the development of hydropower, wind farms and solar parks for production of grid power. In addition to focusing on hydropower where the preconditions are met, the aid must to a larger extent be focused on solar energy and wind power plants in partner countries in Sub-Saharan Africa.
The Ministry of Foreign Affairs considers that it is in hydropower that Norway has comparative advantages because Norwegian companies have extensive experience in building hydropower plants and have developed internationally recognised expertise in this area.

In 2000–2013, just over NOK 270 million was granted to build or upgrade national power plants in the seven core countries. This support has primarily gone to the upgrading of existing hydropower plants in Liberia, Tanzania, Uganda and Nepal. The last major state-owned power plant in Africa that was built with Norwegian assistance, the Kihansi hydroelectric plant in Tanzania, was completed in 2000. Since 2005, less direct support has been provided for the development of power generation than in previous years.

Development of power plants requires large investments and the Norwegian authorities are therefore working to encourage the private sector to make the necessary investments in the energy sector. In addition, support for exploratory studies that assess the feasibility of potential development projects has been provided throughout the period. The audit shows that this approach has resulted in little new production in the core countries.

The audit also shows that Norwegian development assistance to clean energy is still mainly directed at hydropower, although the countries have ample opportunities to utilise solar and wind energy resources. In Tanzania, power generation has fallen in

several periods due to drought. The Office of the Auditor General (OAG) believes that a somewhat one-sided focus on hydropower makes the recipient countries more vulnerable to energy supply failures than a broader focus on hydro, wind and solar power would have done.

2.1.2 The Ministry of Foreign Affairs lacks sound policy instruments to spur private investments in countries with weak framework conditions

The Norwegian Investment Fund for Developing Countries, Norfund, is the most important Norwegian instrument for spurring private investments in the energy sector in the least developed countries (LDCs). In 2007–2013, Norfund's investments in renewable energy accounted for nearly half of Norway's total development assistance to clean energy. In Proposition 1 S (2013–2014), the Ministry of Foreign Affairs stated that Norfund will become an even more key instrument in the Government's focus on renewable energy.

The audit shows that two per cent of Norfund's investments in renewable energy went to the core countries in 2007–2013. Norfund has invested in two power plants in these countries, one in Uganda and one in Nepal. At the same time, nearly two-thirds of Norfund's investments in renewable energy were made in upper middle-income countries such as Brazil and Chile.

Norfund shall help realise projects that private companies otherwise would not have entered into due to high risk, although individual investments must still be profitable for the established enterprise to be viable. Just how well a country facilitates profitable commercial investment depends partly on how stable the political, economic and social conditions are in the country, how efficiently the bureaucracy facilitates business, how the labour market is regulated, and access to the necessary capital and infrastructure – including access to electricity.

The audit shows that due to weak framework conditions, Norfund has been largely unable to identify profitable projects in the core countries.

In the OAG's opinion, Norfund's current framework conditions and profitability requirement make the fund an unsuitable instrument for triggering private investments in the countries with the weakest financial and legal framework conditions. In the OAG's opinion, there is a need for alternative instruments to trigger private investments in these countries.

2.1.3 Norwegian-supported initiatives for developing power grids have poor economic sustainability

The audit shows that the embassies in Tanzania and Mozambique have provided considerable support to the development of the power grid to give poor households in rural areas access to electricity. The national electric utility in Mozambique is one of the power companies on the African continent that has increased access to the most households by extending the power grid. Just in 2011, the power company added 160,000 new customers. In Tanzania, the authorities state that grid extension is a main instrument for offering electricity in rural areas. The Rural Energy Agency in Tanzania primarily supports projects for extending the power grid operated by the national power company TANESCO.

The population in remote and inaccessible areas often have little ability to pay and low electricity consumption. This makes it difficult for individual power companies to recoup the costs of extending extensive infrastructure to these areas. The audit shows that this effect is even more pronounced in Mozambique and Tanzania, where the

national authorities have set electricity prices that are below the cost of supplying the power.

In Mozambique, reduced electricity tariffs, higher production costs and relatively high costs from the extension of the power grid led to a financial loss of 25 per cent for the national power company in 2003–2013. The power company in Tanzania also operates with major financial losses. The strained finances of power companies contribute to poor maintenance of power plants and power grids, and thus the risk of both frequent and lengthy power outages.

In the OAG's opinion, the Ministry of Foreign Affairs has a responsibility to ensure that Norwegian aid is given to projects that are economically sustainable. Support for projects that have poor prospects for economic sustainability, weakens the possibility of long-term and stable energy supplies.

2.2 Development assistance to clean energy has reached the poorest to a marginal degree

The Standing Committee on Foreign Affairs has pointed out that the increased focus on the energy sector through the Clean Energy for Development Initiative shall include poverty-related projects such as rural electrification with solar energy and more efficient wood stoves.

The audit shows that over half of the Norwegian support to clean energy in the core countries has been spent on extending power grids. In 2000–2013 this provided more than 100,000 households with access to power. It is, however, primarily the wealthiest households that have the means to utilise the expanded electricity services. In Sub-Saharan Africa, connection to the power grid costs between NOK 300 and 1,500, an unattainable sum for many poor people living on less than NOK 15 per day. This means that even if the power grid is rolled out to a village, large parts of the population will remain without access to electricity in their own homes.

Norway has supported rural electrification in Zanzibar for decades. Final evaluations of projects show that less than 10 per cent of residents in the villages that have been electrified, connect to the grid. This is far below the target for the projects, and it has resulted in a weaker development effect than expected. The poor households have primarily benefited from electrification through better quality education and health care.

In Nepal, support for local solutions, such as solar panels and micro power plants, has provided about half a million households with electricity. However, the Ministry of Foreign Affairs provides little support for such local development assistance to clean energy solutions in the other priority countries.

The Ministry of Foreign Affairs holds the principle that development assistance to clean energy will contribute to social and economic development. Development aid for increased power generation and energy access will lead to increased commercial activities and employment, which in turn will also benefit the poor. The goal of development assistance is thus broader than increasing access to energy for the poor segment of the population.

However, the audit shows that rural electrification projects in Africa only marginally lead to increased productive activities that contribute to economic growth. In Mozambique, the focus on rural electrification has led to increased production for existing companies. However, the increased electricity services made a negligible contribution to new production activities. Nor did the established companies hire more people, and

new businesses were not established. Insufficient training and provision of small loans mean that relevant investors do not have the expertise or funds to utilise the opportunities that increased energy provision provides. In the OAG's opinion, it is difficult to see the economic effect the Ministry of Foreign Affairs has applied as principle for the development assistance. There is consequently a risk that the goal of reaching the poor will not be attainable for a very long time.

2.3 Weaknesses in planning capacity-building projects cause implementation problems

Capacity building and institutional cooperation are among the most important instruments in development assistance to clean energy. The measures include strengthening expertise and assistance for developing laws and regulations that are necessary for increasing the supply of electricity in developing countries. The Standing Committee on Foreign Affairs has emphasised the importance of aid for capacity building to support the recipient's ownership of their own development.

In 2000–2013, 27 capacity-building agreements were signed in the core countries with ministries, power companies and regulatory authorities. The audit shows that many of these projects have had problems in that the recipient institution has not had the necessary capacity or expertise to implement the agreed activities. In Tanzania, frequent replacements of personnel and turnover of senior management have had negative consequences for the progress of a project and the organisation's ownership of it. In many other countries, the cooperation partner has both lacked personnel and had a high turnover of employees, weakening the potential long-term benefits of the training for the organisation. In the OAG's opinion, it could appear as though the planning of the institutional cooperation does not take sufficient consideration of the constraints within which the recipient organisations work.

The audit also shows that several capacity building projects have made slow progress and achieved little. The result framework that defines goals and expected results has been weak and unsuitable for following the progress of the cooperation. Important basic data and indicators for measuring achieved results and effects are missing for a number of projects. In many cases, there is also a lack of coherence between the activities that are carried out and the results that are expected. It turns out also that the recipient organisations do not always give capacity building projects the necessary priority, either because of lack of anchoring in the management or lack of financial resources and staffing.

The OAG believes that better background knowledge and stronger dialogue during the planning phase of capacity building-related development projects can help ensure that defined objectives and expected results are more closely aligned with the recipients' needs, and that the results framework is perceived by both parties as more appropriate.

2.4 The Ministry of Foreign Affairs' inadequate planning and decision-making basis weakens its ability to manage aid effectively

The Standing Committee on Foreign Affairs has emphasised that development in poor countries requires an overall and coherent use of instruments, so that aid becomes more targeted and strategic.

The Ministry of Foreign Affairs' action plan for the 2009 Clean Energy for Development Initiative, states that the Ministry, in dialogue with the embassies, shall specify the recommended guidelines in detailed activity plans that outline goals, projects and expected results, and determine responsibilities and deadlines. The audit shows that

the embassies have not developed activity plans for aid or analyses of the energy sector in the partner countries.

The embassies' strategic plans and activity plans for 2000–2013 provide information about ongoing Norwegian-supported assistance measures, implementation risks and future priorities. The plans indicate what is decided, but they contain little information about the background and the factual basis for the embassies' decisions and priorities

Furthermore, the audit shows that the Ministry of Foreign Affairs has not updated key plans and documents for development assistance to clean energy. The Ministry was to consider the sustainability of the Clean Energy for Development Initiative after two years, update the 2009 action plan annually and conduct a mid-term review of the Action Plan for Environment in Development Cooperation. None of these measures have been implemented to date.

In 2004, aid administration was decentralised, with greater decision-making powers assigned to the embassies. The Ministry of Foreign Affairs justifies the decentralisation with the belief that the embassies' local knowledge will help to ensure that the decisions that are made provide the best and most sustainable results in each partner country.

In the opinion of the OAG, it is difficult to realise the aspirations underlying the Clean Energy for Development Initiative unless embassies increasingly follow up the plan-related prerequisites on which the initiative is based. The OAG also believes that flawed decision making weakens the Ministry of Foreign Affairs' ability to manage aid effectively and to identify the instruments best suited to the particular partner country.

3 The Office of the Auditor General's recommendations

The OAG recommends that the Ministry of Foreign Affairs

- Consider how technological advances in renewable energy could be better utilised to promote increased and more stable power generation in recipient countries and reach the poor segment of the population more efficiently
- Consider alternative measures that can trigger private investments in clean energy in the countries with the weakest framework conditions
- Ensure that capacity building planning increasingly takes into account the recipient organisation's organisational challenges, capacity and expertise
- Ensure that the embassies implement and improve the analyses as a basis for priorities and decisions concerning development assistance to clean energy; this will provide a decision-making basis that can help ensure that the use of instruments is better adapted to the conditions in the partner countries.

4 The Ministry's follow-up

The Minister emphasises that the report provides concrete and useful recommendations that will be followed up in the Ministry's further work on development assistance to clean energy.

With respect to the OAG's recommendation to consider how technological advances in renewable energy could be better utilised, the Minister replies that the past ten years of technological development and sharp price drops have made solar, wind and biomass energy more competitive. This will make it possible to expand the breadth of the focus on clean energy. At the same time, the Minister notes that hydropower is an area where Norwegian aid is well placed to contribute. Many of the partner countries also have significant hydropower resources they would like to exploit, and have therefore requested Norwegian aid in this area. The Minister points out that other donor countries have more experience and expertise within solar and wind power than Norway can offer.

The Ministry of Foreign Affairs endorses the OAG's recommendation to strengthen efforts to improve energy access in rural areas with small-scale renewable solutions. The Ministry agrees that there is a need to supplement grid extension with other initiatives to reach the poorest population, including households where conditions are not conducive to grid expansion or establishment of isolated grids. At the same time, the Ministry points out several challenges that prevent increased use of decentralised solutions, such as lack of access to financing and weak framework conditions for commercial operators.

The Minister emphasises that to reduce poverty, it is important that access to electricity creates businesses and jobs. This happens over time and also depends on the development of other infrastructure and general framework conditions. The Ministry will look more at the possibilities of how increased access to energy, for example through the Norwegian support for grid expansion, can contribute to increased economic development.

The Minister points out that it has been difficult for Norfund to find mature projects and investors who are willing to invest in countries that are characterised by generally weak governance and poor framework conditions. The Minister points out that the authorities in the partner countries have gradually gained greater understanding of the importance of creating better investment climates and predictable framework conditions. The poorest countries have, in the Ministry's opinion, become somewhat more attractive for investments in clean energy. In recent years, Norfund has bolstered its clean energy efforts in poor countries, including the creation of a project development facility and the reorganisation of SN Power. Furthermore, the Minister notes that efforts are under way to find suitable mechanisms where grant funds can be combined with investment funds to realise projects that would otherwise not have been undertaken.

To the OAG's recommendation to consider alternative measures that can trigger private investment in clean energy, the Minister replies that a process is under way to identify multilateral and other international financing instruments that can contribute to more private investments in clean energy in developing countries. Based on lessons learned from a pilot project for innovative financing mechanisms in Uganda, it will be considered whether similar models can be used in other partner countries in Africa and Asia. The Minister stresses that Norfund will continue to be an important development policy instrument for investments in renewable energy and the geographical shift towards investment in the least developed countries and Sub-Saharan Africa will continue.

Regarding capacity building, the Ministry of Foreign Affairs recognises that not all goals have been reached. The Ministry also has experience from several other projects where weaknesses in the planning of capacity building projects have created problems

in the implementation and progress. According to the Ministry, this may be due to the need to devote more resources to obtaining thorough knowledge of partner institutions, but also that assessments made of the institution's ability to absorb and put into practice the capacity strengthening that has been offered have been too optimistic. The Minister underlines that more thorough preparation and better dialogue with partner country governments and relevant institutions will be required to ensure that the projects are adapted to the realities of the individual institution and thereby contribute to realistic results.

The Ministry of Foreign Affairs will carefully review how we can ensure that capacity building takes into account the recipient organisation's organisational challenges, capacity and expertise, as the OAG recommends. Competitive tendering of contracts and capacity building and institutional cooperation programmes will be considered. The Minister points out that there will be a need to promote greater continuity by retaining employees with training in the recipient organisation, and the Ministry will take a closer look at resource and skills needs when planning capacity building projects. The goal will be to ensure a comprehensive assessment of institutional needs and preconditions, systematic assessment of relevant policy instruments and initiatives, and the establishment of better framework conditions for measuring results.

The Minister agrees with the OAG that support for development in poor countries requires a comprehensive and coordinated use of instruments so that aid is more targeted. The Ministry agrees that there is a need for more coordinated management of clean energy efforts, and the Minister refers in this context to the fact that a common budget item – chapter item 166.74 – was introduced in 2013 for clean energy initiatives. This has provided a better overview of budgetary development and made it easier to steer the funds to where they produce the best results. The Ministry aims to improve management tools through the budget and activity plan processes. Efforts to develop clear and operational goals, performance indicators and good measurement systems will be a key priority in the future. The Minister maintains that the OAG's review of energy aid will be an important contribution to this process.

Responsibility for implementing development policy has been delegated to the embassies in the individual partner countries. The Minister justifies this with that decisions about cooperation should be taken in close consultation with the recipient.

Regarding the OAG's recommendation to ensure that the embassies conduct and improve analyses as a basis for aid, the Minister agrees that thorough analyses are a prerequisite for the priorities that are set and the decisions that are made within the energy initiative. The Ministry will examine how the quality of the embassies' planning can be improved to exploit Norway's comparative advantages.

The Ministry of Foreign Affairs has recently obtained input from embassies with large energy portfolios on how energy initiatives should be prioritised and improved. The Minister views this as important for the strategic actions that will be taken to ensure a decision-making platform that ensures that the use of policy instruments best fits the conditions in partner countries, as recommended by the OAG.

The Minister relates that the Ministry will review the number of countries and multilateral investments in clean energy with the aim of greater concentration. This can improve performance and achievement.

5 The Office of the Auditor General's closing comments

The OAG has no further comments on the matter.

The case will be submitted to the Storting.

Approved at the meeting of the Office of the Auditor General, 17 June 2014

Per-Kristian Foss **Karl Eirik Schjøtt-Pedersen**

Beate Heieren Hundhammer **Gunn Karin Gjul** **Arve Lønnum**

Bjørg Selås

Appendix 1

The Office of the Auditor General's letter to the Minister

Riksrevisjonen

Our executive officer
Guri Andrea Lowrie +47 22241238
Our date 20 May 2014 | Our reference 2013/00673-59
Your date | Your reference

Deferred public disclosure cf. Section 18(2) of the Auditor General Act

Ministry of Foreign Affairs
P.O. Box 8114 Dep
0032 OSLO
Att.: Minister Børge Brende

The Office of the Auditor General's investigation of Norwegian development assistance to clean energy

Enclosed please find the draft Document 3:x (2013—2014) *The Office of the Auditor General's investigation of Norwegian development assistance to clean energy*.

The document is based on a report submitted to the Ministry of Foreign Affairs with our letter of 1 April 2014 and the Ministry's response dated 29 April 2014.

The Minister is requested to give an account of how the Ministry will follow up the OAG's comments and recommendations, and whether, if applicable, the Ministry disagrees with the Office of the Auditor General.

The Ministry's follow-up will be summarised in the final document submitted to the Storting. The Minister's entire response will be enclosed with the document.

Response deadline: 3 June 2014.

For the Board of Auditors General
Per-Kristian Foss
Auditor General

Enclosure: Draft Document 3:x (2013—2014) *The Office of the Auditor General's investigation of Norwegian development assistance to clean energy*

The original letter in Norwegian has been translated into English.

Appendix 2

The Minister's response

THE ROYAL
MINISTRY OF FOREIGN AFFAIRS

The Minister of Foreign Affairs

The Office of the Auditor General of Norway
Auditor General Per-Kristian Foss
P.O. Box 8130 Dep
0032 Oslo

Delayed public disclosure, cf. Section 5(2) of Freedom of Information Act

Your ref.: 2013/00673-59 Our ref.: 13/01367-1 Date: 3 June 2014

The Office of the Auditor General's investigation of Norwegian development assistance to clean energy

I refer to the Office of the Auditor General's letter of 20 May with enclosed draft Document 3:x (2013-2014) *Office of the Auditor General's investigation of Norwegian development assistance to clean energy*

I also refer to the draft report which was submitted to the Ministry of Foreign Affairs in a letter dated April 1. The draft report was thoroughly reviewed by the Ministry, and our comments were formulated in a response letter dated April 29.

The Office of the Auditor General (OAG) has done extensive work on its investigation of Norwegian development assistance to clean energy in 2000-2013. I would like to express the Ministry's satisfaction with the dialogue during the preparation of the report, including the handling of the Ministry's closing remarks on the main analysis report.

The report provides concrete and useful recommendations that will be followed up in the Ministry's further work on development assistance to clean energy.

1 The Office of the Auditor General's comments

1.1 Norwegian development assistance has contributed little to increase access to clean energy

1.1.1 The aid has led to little increased renewable power generation in the core countries

The OAG points out that the aid has led to little increased renewable power generation in the partner countries and that Norway should have placed less emphasis on hydro-power and focused more instead on wind and solar energy.

The Ministry wishes to emphasise that the purpose of the energy initiative is broader than increased power generation and connection to the electricity grid. The Storting has established this in the white paper *Sharing for prosperity* (Meld. St. 25 (2012–2013)), p. 46: "Norway's support for investments in expanding the grid and

The original letter in Norwegian has been translated into English.

increasing the production of renewable energy is based on a broad social and developmental perspective. We place particular emphasis on the role a stable and secure energy supply plays in relation to economic growth, employment and social development."

A secure supply of electricity will be one of several preconditions that will contribute to a better investment climate for large and medium-sized industries and help create more jobs in developing countries. Increased and more stable access to electricity is important for the production of public services. It will enable local clinics and hospitals to keep medicines cold, perform operations when it is dark and use medical equipment that require electricity. With electricity, schools can provide better quality services and be open in the evening, and street lighting will make everyday life safer for villagers, which is very important for women and girls.

In recent years, technological development coupled with a sharp drop in prices have made solar, wind and biomass energy more competitive, making it possible to expand the breadth of the clean energy initiative. The OAG points out that a broader focus on solar and wind in addition to hydropower would make the countries less vulnerable.

Norwegian clean energy initiatives must be viewed in the context of the countries' needs and the various donors - including Norway's comparative advantages. Hydropower has been and is an area where Norway is well placed to contribute because of its long traditions and recognised expertise. Many of our partner countries also have significant hydropower resources they would like to exploit, and have therefore requested Norwegian aid in this area.

Power plants are capital-intensive, have a long investment horizon and there is often only one national buyer of the power. These factors make these types of projects especially risky. The Ministry has several means of reducing risk, including feasibility studies. The OAG points out that support for feasibility studies has resulted in little new power generation. In this connection, the Ministry wishes to point out the high risks associated with such projects and that the purpose of preliminary and feasibility studies is also to ascertain whether development projects are feasible and to avoid initiating unviable projects.

1.1.2 The Ministry of Foreign Affairs lacks sound policy instruments to spur private investments in countries with poor framework conditions

The OAG writes that Norfund's framework conditions and profitability requirements make the fund an inappropriate tool for triggering investments in these countries and that, in the OAG's view, there is a need for alternative instruments. In accordance with its instructions from the Storting, Norfund is to conduct its operations in a financially sound manner and enter into projects that are commercially profitable, while investing in the poorest countries at the same time. Norfund always enters into projects as a minority owner together with one or more investors. Under its bylaws, Norfund is to primarily contribute partial financing for the establishment of new enterprises or necessary restructuring of existing business activities.

It has proven difficult to find mature projects and investors who are willing to invest in these countries, which are characterised by generally weak governance and poor framework conditions. For this reason, only a small portion of Norfund's clean energy investments have taken place in these countries.

The framework conditions in the poorest countries have been and are difficult, due to factors that include low electricity prices, poor ability to pay and uncertain terms for

private capital. However, a gradual change is starting to take place in that there is greater recognition in government of the importance of creating a better investment climate and predictable conditions. The poorest countries have become somewhat more attractive for investments in clean energy. Among other things, Norfund is involved in several energy project start-ups in Kenya, Zambia and South Sudan. Last year, about 49% of Norfund's investment portfolio was in renewable energy. Geographically, Sub-Saharan Africa and the least developed countries (LDCs) characterised the investment scenario in 2013. Disregarding investments in SN Power, 68% of new investments were made in Sub-Saharan Africa, while 42% were made in LDCs. Including SN Power, Africa accounts for 43% and LDCs 28%.

In recent years, Norfund has taken several steps to strengthen its commitment to clean energy in poor countries. In 2011, Norfund established a special project development facility for renewable energy projects, where many of the projects that received funding in the development phase are now starting to be realised as commercial investment projects. Furthermore, Norfund, together with the Ministry of Foreign Affairs and embassies, is working to find suitable mechanisms where grant funds can be combined with investment funds to realise projects that would otherwise not have been undertaken. In addition, Norfund's SN Power initiative is under reorganisation. Norfund has recently signed an agreement with Statkraft, which means that the new SN Power will have a geographic focus largely coinciding with Norfund's geographic priorities. Norfund can gradually divest its investments in geographic areas that are not in Norfund's priority regions, and increase investments in priority regions such as Sub-Saharan Africa.

1.1.3 Norwegian-supported initiatives for developing power grids have poor economic sustainability

In the opinion of the OAG, Norwegian aid is to be given to projects that are economically viable, and points out that initiatives for developing power grids have poor economic sustainability.

As the OAG points out, ensuring the financial profitability and thus long-term sustainability of electrification projects is crucial. Depending on local circumstances, this can present challenges that include general framework conditions and tariffs, institutional capacity, facilitating broader development and productive use of energy, as well as costs. The tariff issue is critical in many poor countries where the price of electricity is kept at a level that makes it difficult for power companies to operate at a profit, despite the fact that the expansion of the grid was subsidised by development aid funds. A sudden rise of electricity prices will hit the poorest hardest and be politically difficult for the authorities, especially where the regularity of the power supplies is low. Several countries are therefore trying to raise prices gradually. Gift assistance is therefore essential for fully funding such projects.

1.2 Development assistance to clean energy has reached the poorest to a marginal degree

In its report, the OAG notes that energy aid has reached the poorest to a marginal degree, and that the reason for this is the unilateral focus on expanding the national power grid. The Ministry agrees with the need to supplement grid extension with other investments to reach the poorest, including households where conditions are not conducive to grid expansion or establishment of isolated grids.

In a longer term perspective, it must be taken into account that access to electricity will contribute to long-term development processes and grid expansion is usually the

preferred long-term solution. Experience shows that it takes time to reach everyone and capture the positive knock-on effects.

As previously pointed out, technological and cost developments of recent years have made decentralised solutions based on solar, wind and micro power plants more attractive, although maintenance and payment collection are still demanding tasks. Such decentralised solutions have long been competitive in areas without possibilities to be connected to the central grid. This development will help alter the balance between traditional grid-based power supply, isolated grids and decentralised solutions as economically preferred options. However, many of the bottlenecks for increased use of decentralised solutions are still present, including poor access to financing and weak framework conditions for the establishment of commercial energy companies.

It must also be taken into consideration that the need for the greatest possible scope of power generation means that there are other donor countries that are more experienced and have greater expertise and capacity in, e.g., wind and solar energy than Norway can offer.

1.3 Weaknesses in planning capacity development projects cause implementation problems

The OAG underlines that it is important to strengthen the capacity of partner country institutions. The OAG's report confirms the experiences of several other capacity building projects where weaknesses in capacity development planning have created implementation problems that have hampered progress. The Ministry recognises that this is a challenge and that all goals have not been met.

The reason for entering into capacity development projects and upgrading skills is that the authorities and their subordinate agencies fail to perform their duties in a satisfactory manner. This is a situation that needs to be changed to ensure longevity and sustainability. Poor progress and a lack of results may be due to the need to devote more resources to obtaining thorough knowledge of partner institutions, but also that assessments made of the institution's ability to absorb and put into practice the capacity strengthening that is offered have been too optimistic. Frequent turnover of staff in partner organisations is also a problem. More thorough preparation and better dialogue with partner country governments and relevant institutions will be necessary to ensure that the projects are adapted to the realities of the institution and thereby contribute to realistic results.

1.4 The Ministry of Foreign Affairs' inadequate planning and decision-making basis weakens its ability to manage aid effectively

The Ministry agrees that support for development in poor countries requires an overall and coordinated use of instruments so that aid is more targeted. The Ministry agrees that there is a need for a more coordinated management of clean energy efforts, and concrete initiatives described in Item 2 have already been taken.

While the Ministry is responsible for the overall political management of development cooperation, Norad is responsible for providing expert advice and the embassies are responsible for policy implementation at the national level in accordance with the letter of allocation. This delegation to the embassies is justified in the assessment that decisions on cooperation in developing countries should be taken in close dialogue with the recipient. The embassies in developing countries are best suited to this and to understanding the complexity and the many considerations to be weighed.

As the OAG points out, it is true that only some of the embassies have developed activity plans for support for clean energy as a whole or undertaken a detailed examination of the energy sector before entering into new projects. The Ministry will point out that the embassies' proposals for activities are approved by the Ministry in connection with the missions' activity plan process and that these are based on the embassies' in-depth knowledge of the sector.

2. The Office of the Auditor General's recommendations

2.1. Consider how technological advances in renewable energy could be better utilised to promote increased and more stable power generation in recipient countries and reach the poor segment of the population more efficiently

The Ministry of Foreign Affairs endorses the OAG's recommendation and will strengthen efforts to improve energy access in rural areas through the use of renewable small-scale solutions.

In recent years, energy has been promoted as a priority area on the international development agenda, including through the Norwegian contribution to the UN initiative "Sustainable Energy for All" (SE4All). As many other donors work in the same sector, it is important that Norway continues to focus on areas where we have state-of-the-art expertise and competitive advantages. Hydropower to both national and isolated grids should therefore remain a key priority when the preconditions are present.

To reduce poverty, it is important that access to electricity creates business activities and jobs. This evolves over time and also depends on the development of other infrastructure and general framework conditions. The Ministry will look into the possibility of linking, to a greater extent, business development with access to energy through, e.g., grid extensions supported by Norwegian funds.

The Ministry will also emphasise more active follow-up and political dialogue on electricity tariffs and other framework conditions in partner countries.

2.2 Consider alternative measures that can trigger private investments in clean energy in the countries with the weakest framework conditions

The Ministry of Foreign Affairs is working along several lines to help create the necessary framework conditions to trigger private investments and review existing instruments to stimulate private investment in clean energy and other areas. In this context, a process is taking place to identify multilateral and other international financing instruments that can contribute to more private investments in clean energy in developing countries. The Ministry will return to this subject in the budget propositions going forward. Norfund is an important development policy instrument with a clear mandate for investments in renewable energy and the geographical shift towards investments in LDCs and Sub-Saharan Africa will continue. Efforts are under way through Energy+ and other means to identify business models and instruments to scale up and improve the general framework in the energy sector.

Norwegian development aid funds have on several occasions funded feasibility studies for development projects which so far have not been realised. This may be because the projects are not considered feasible or economically viable, but also that the projects for various reasons have not been able to attract investors.

Since last year Norway has supported GET FiT, a pilot project with innovative funding mechanisms in Uganda, together with the United Kingdom (DFID),

the European Union and Germany (KfW). It involves both water and biomass projects, while several solar projects connected to the grid under consideration. The experience gained will be used to determine the models that can be used in other partner countries in Africa and Asia.

2.3 Ensure that capacity building planning increasingly takes into account the recipient organisation's organisational challenges, capacity and expertise
Norwegian energy aid goes to energy production, construction of transmission and distribution lines and capacity and institution building. The need for support is generally high in all these areas. Sufficient capacity building is a prerequisite for ensuring that the energy initiative will provide sustainable and long-term effects. At the same time this can be a difficult task in countries with weak institutions, an incomplete regulatory framework and generally little knowledge of what is required to develop the energy sector. These challenges grow larger in fragile states that are trying to rebuild after prolonged wars and conflicts. The Ministry of Foreign Affairs will give thorough consideration to how we can ensure that capacity building takes the recipient organisation's organisational challenges, capacity and expertise into account. Competitive tendering of contracts and capacity building and institutional cooperation programmes will be considered. There will also be a need to work for greater continuity by encouraging those who have received training to remain in the recipient organisation. Vocational education will be considered and included in the Government's broad commitment to the role of education in development policy.

This year marks the scheduled start of a joint evaluation with Sida in Sweden and in Danida in Denmark of capacity development support. The evaluation is expected to increase our knowledge of, e.g., sound planning of aid for capacity development in various sectors.

The Ministry will take a closer look at the resources and skills needed in planning capacity-building projects. The goal will be to ensure a comprehensive assessment of institutional needs and preconditions, systematic assessment of relevant policy instruments and initiatives, and the establishment of better framework for measuring results.

2.4 Make sure that embassies implement and improve the analyses used for priorities and decisions concerning development assistance to clean energy; this will provide a decision-making basis that can help ensure that the use of policy instruments is better adapted to the conditions in partner countries
Thorough analyses are a prerequisite for the priorities and decisions to be made within the energy initiative. The recipient country's energy plans, statutory rules and budget priorities for the energy sector serve as the basis for analyses and feasibility studies prepared before a decision is taken on the development aid projects that are to receive support. The Ministry will look into how to improve the quality of embassy planning to exploit Norwegian comparative advantages.

Earlier this year, the Ministry obtained reports from embassies with large energy portfolios to get input on how energy initiatives should be prioritised and improved. The embassies' input is important for the strategic actions that will be taken to ensure a decision-making platform that ensures that ensures that the use of policy instruments best fits the conditions in partner countries as recommended by the OAG.

In 2013, the Ministry introduced a joint budget item for clean energy initiatives (capital item 166.74), which has provided a better overview of budgetary development and made it easier to steer funds to where it produces the best results. The budget and

activity plan processes will also be reviewed with the aim of improving management tools.

The Ministry has initiated a broad survey aimed at reducing the number of partner countries in development aid policy. In this context we will also review the number of countries and multilateral engagements in clean energy with the aim of greater concentration as this will contribute to better outcomes and goal achievement.

As with all other development cooperation, I will place great emphasis on contributing to concrete and measurable results through energy cooperation. Efforts to develop clear and operational goals, performance indicators and good measurement systems will be a key priority in the future. The OAG's review of energy aid will be an important contribution to this work. I look forward to continuing our good and constructive collaboration on this with the OAG.

Sincerely,

(Signed) Børge Brende
Børge Brende

Appendix 3

Report: The Office of the Auditor General's investigation of Norwegian development assistance to clean energy

The audit was conducted in line with the Act and Instructions relating to the activities of the Office of the Auditor General as well as with the guidelines for performance audits, which are consistent with and based on ISSAI 300, INTOSAI's international standards for performance audits.

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1 Background

One point three billion people lack access to electricity. More than 95 per cent of those who lack access to modern energy[1] live in Sub-Saharan Africa or in developing countries in Asia. Eighty-four per cent of them live in rural areas.[2] According to the International Energy Agency, IEA, access to electricity in Sub-Saharan Africa will decline by 2025 due to population growth. In 2030, the region will account for two-thirds of the global population without access to electricity.

In Proposition 1 S (2013–2014) and previous years' budget bills, the Ministry of Foreign Affairs refers to the fact that stable access to better and more modern energy services provides opportunities for economic growth and social development. The Ministry also emphasises that improved access to clean energy contributes to the eradication of poverty and facilitates more sustainable development. The focus on clean energy in developing countries is an important part of Norway's overall policy in the climate and energy area. Norwegian authorities are working to include access to energy in the UN global development goals for the period after 2015.

1.3 billion people lack access to electricity. The vast majority of these people live in Sub-Saharan Africa and in developing countries in Asia. Photo: NASA Earth Observatory

The Ministry of Foreign Affairs has granted development assistance for development of the energy sector for several decades and the goals for this aid have been stable.[3] Awareness regarding clean energy in aid cooperation and the climate debate increased from the mid-2000s. This, combined with a significant increase in development aid funding for energy, demanded better coordination of Norwegian efforts. On this basis, the Ministry launched the *Clean Energy for Development Initiative* in 2007.

The initiative provides guidelines for the approach to clean energy in development cooperation up to 2015. Clean energy includes the use of renewable energy sources such as water, sun and wind for power generation, and the use of efficient cook stoves

1) The *International Energy Agency* defines "access to modern energy" as access to clean cook stoves, connection to electricity and a minimum consumption of 250 kWh per year per household.
2) International Energy Agency (IEA), *World Energy Outlook 2011*, October 2011.
3) Cf. Norad (2006) *State of the art study: The long-term effects of assistance to the power sector*, pp. 38–39

for food preparation in order to reduce indoor pollution in households. The initiative's policy goals are to a large extent a continuation of the goals that have applied for Norwegian energy aid for several years. The main goal of the initiative is to improve access to clean energy at a reasonable price, based on long-term management of natural resources and efficient energy consumption. This will contribute to economic and social development in partner countries included in the initiative, as well as the international effort to reduce greenhouse gas emissions.[4]

Measures where Norwegian actors have special expertise, such as development of hydropower, wind and solar farms and the main grid, must be prioritised. Institutional cooperation is an important part of development assistance to clean energy and includes assistance to develop national plans, legislation and regulations necessary to increase energy supply in developing countries. The provision of risk capital, guidance and support for better framework conditions will stimulate private investment in power generation in developing countries. The initiative also includes local measures such as providing more efficient wood-burning stoves and rural electrification through e.g. mini hydropower plants and solar energy. The Ministry of Foreign Affairs funds many multilateral initiatives and programmes within energy. In 2011, the Norwegian Prime Minister and UN Secretary General launched the international energy and climate initiative Energy+.

In Proposition 1 S (2013–2014), the Ministry of Foreign Affairs states that Africa is the most important focus area for Norwegian aid for energy. The following seven countries are core countries within the Clean Energy for Development Initiative: Ethiopia, Liberia, Mozambique, Nepal, Tanzania, Uganda and East Timor.
The Ministry stated that cooperation with East Timor is about to be concluded, while South Sudan and Myanmar are new partner countries. A significant percentage of the population in these countries lacks access to electricity, energy generation is low and the power supply is unstable. Government administrations in Liberia and Nepal are also weakened after years of civil war.

During the period of investigation, Norwegian aid funds granted to the partner countries were primarily used to build national power plants and expand central power grids. Projects within capacity development and institutional cooperation have also been assigned high priority.

It has long been an important goal for the Ministry of Foreign Affairs to stimulate private investments. The construction of power plants and central power grids requires major investments. According to the International Energy Agency (IEA), there is a need for investments totalling NOK 6,000 billion in order to achieve full access to energy globally by 2030. Nearly two-thirds of these funds will be needed in Sub-Saharan Africa.[5] The Norwegian Investment Fund for Developing Countries, Norfund, is the most important policy instrument available to the Ministry to reach this goal. In Proposition 1 S (2013–2014), the Ministry emphasises that Norfund is an increasingly important tool in the Government's development policy, and that Norfund will become even more important within the area of renewable energy.

1.1 Objective and audit questions

The objective of the audit has been to assess to what extent Norwegian development assistance to clean energy is in line with the Storting's (Norwegian parliament) goal of

4) Ministry of Foreign Affairs and Norad (2007), *Plan for the Clean Energy for Development Initiative*.
5) International Energy Agency (IEA) (2011) *World Energy Outlook 2011. Energy for all. Financing access for the poor. Special early excerpt*, p. 20.

improving access to sustainable energy services to stimulate economic growth and better living conditions for the poor. The audit also considers causes of potential deficient goal attainment. The audit generally covers the development assistance to clean energy to the seven core countries. Norwegian development assistance to energy in Tanzania has been subject to an in-depth analysis. Since the year 2000, the Tanzanian energy sector has received about NOK 750 million in development assistance to clean energy, and this aid includes many of the Ministry's policy instruments. The audit covers the period from 2000 to 2013.

The audit covers the following audit questions:

1 **To what extent does Norwegian development assistance improve access to clean energy?**
The audit question addresses the results of Norwegian aid for power generation. This includes direct support for construction and upgrades of power plants and facilitation of private investments within power generation. The audit question addresses achieved results in all the core countries.

2 **To what extent has Norwegian development assistance to clean energy benefited the poor?**
The audit question describes the results of measures for development of main and distribution grids. It also deals with how the improved access to electricity is distributed among different households, and to what extent the improved power supply has had an impact on the poorest segment of the population. The audit question addresses achieved results in all the core countries.

3 **To what extent does Norwegian development assistance to clean energy contribute to sustainable power supply?**
Ownership of one's own development and competence for sound administration of the energy sector are important preconditions for ensuring a lasting, stable energy supply. One important instrument in Norwegian aid is support for capacity development. This audit question primarily addresses the results achieved by Norwegian aid for capacity development in the energy sector.

4 **To what extent does the Ministry of Foreign Affairs, through its overall administration, ensure that the goals for development assistance to clean energy are achieved?**
This audit question focuses on the Ministry's administration of and strategies for development assistance to clean energy, the embassies' priorities and reporting of results of development assistance to clean energy. The audit question includes all embassies in the core countries.

1.2 Delimitations

Seven countries were chosen as core countries in connection with the launch of the Clean Energy for Development Initiative. The audit covers clean energy aid to these countries and concentrates on the aid administered by the embassies.

2 Methodology

2.1 Introduction to the methodological approach

The audit questions in the investigation have been answered through document and statistical analysis, interviews with stakeholders in Norway and Tanzania, and through focus group meetings. A list of questions was also sent to the embassies in the core countries for energy aid.
The audit covers the period of 2000–2013 to map out long term results. Data collection was concluded in March 2014.

The documents analysed include project documentation from selected projects in the core countries, governing documents and other internal documents from the Ministry of Foreign Affairs. Key Storting documents, result reports and evaluations from the Ministry, Norad and the Norwegian Investment Fund for Developing Countries (Norfund), as well as Norwegian and international technical literature in the area were also reviewed.

Eighteen interviews have been conducted. In Norway, the Ministry of Foreign Affairs, Norad, the Ministry's Department for Regional Affairs and Development, Norfund, Statnett and the Norwegian Water Resources and Energy Directorate were interviewed. All interview minutes have been confirmed.

It is presumed that the management in the organisations interviewed have ensured that the interviewees who met with the OAG, were the representatives most qualified to answer the OAG's questions. The agency or organisation in question is therefore listed as the source, and not the individual employee who was interviewed.

In order to gain better insight into existing challenges in the energy area in developing countries, two focus group meetings were also held in Tanzania. The focus group meetings have provided insight from independent national actors into how commerce and industry and the population of Tanzania are affected by challenges in the energy sector.

All embassies responded to the list of questions sent out. The responses provide information about concrete results of the energy aid (generated power, the number of new grid connections, the number of projects in collaboration with private actors) and the embassies' experience with capacity development projects. The embassies' responses also explain the assessments that lay behind the priorities in the energy portfolio, and describe the management dialogue with the Ministry of Foreign Affairs. The list of questions has been enclosed with the report.

Norway does not have embassies in East Timor and Liberia. In these cases, the list of questions was therefore answered by the Norwegian Embassy in Indonesia, which administers projects in East Timor, and by the Norwegian Embassy in Ghana, which administers projects in Liberia.

Statistics on the size and distribution of Norwegian development assistance to clean energy were obtained from Norad's *Norwegian Aid Statistics* database. This database contains the information concerning Norwegian aid provided annually by Norwegian authorities to the OECD's Development Assistance Committee (OECD DAC).
The data was obtained from main category *230 – Energy generation and supply*,

and further divided into ten sub-categories.[6] The selection includes both bilateral and multilateral measures registered under these categories. Sub-categories that include non-renewable energy are not included in the selection. This means that the figures deviate somewhat from Norad's annual result report for clean energy, which includes sub-categories with both renewable and non-renewable energy. Furthermore, clean energy-related aid may be registered under other sector categories that do not fall under the selection. An example is the funding for the World Bank's strategic Climate Investment Fund and funding registered as core support. The selection does not necessarily correspond with the measures funded over chapter item 166.74 since 2012. Statistical analyses have also been undertaken based on statistics on power generation, access to electricity and energy consumption obtained from the Tanzanian authorities and research institutions.

The impact of development assistance to clean energy is influenced by many different variables. In order to gain comprehensive insight, the audit included an in-depth analysis of Tanzania. The in-depth analysis has contributed insight into relevant conditions that affect the aid, such as economic and political aspects of the energy sector. During the period from 2000–2013, Tanzania received about NOK 750 million in development assistance to clean energy, and has received energy aid from the Ministry of Foreign Affairs since the 1970s.

The Norwegian energy portfolio in Tanzania covers many of the Ministry of Foreign Affair's instruments, with projects within both generation and distribution of power, as well as capacity development and some local measures. According to Norfund, the majority of challenges in the energy area in developing countries are represented in Tanzania. This entails that the Ministry's handling of these challenges in Tanzania is relevant to other core countries.

The in-depth analysis in Tanzania included two field visits. A preparatory visit to Tanzania was organised in May 2013. Project documentation from 12 projects was copied from the embassy's archive. Meetings were also held with representatives of the power company Tanzania Electric Supply Company Limited (TANESCO), the Rural Energy Agency (REA), the Energy and Water Utilities Regulatory Authority (EWURA) and the research institute Policy Research for Development (REPOA).

A longer visit to Tanzania was carried out in September–October 2013. The following entities were interviewed:

- **Government authorities:** the Ministry of Energy and Minerals, management and employee representatives from the State-owned power company, Tanzania Electric Supply Company Limited (TANESCO), the Rural Energy Agency (REA), and the Energy and Water Utilities Regulatory Authority (EWURA).

- **Organisations and other donors:** the World Bank, Sida, USAID, Millennium Challenge Corporation (MCC), SNV Netherlands Development Organisation and Tanzania Traditional Energy Development and Environment Organization (TaTEDO).

- **Norwegian actors:** the energy adviser at the Norwegian embassy in Tanzania, as well as a final meeting with the Minister Counsellor, Counsellor and energy adviser.

6) Categories: Energy policy and administrative management; Power generation/renewable sources; Electrical transmission/distribution; Hydro-electric power plants; Geothermal energy; Solar energy; Wind power; Ocean power (not used); Biomass; Energy education/training; Energy research

- **Tanzanian experts:** Two focus group meetings were held. The topic of the first meeting was energy and poverty orientation. The participants included representatives of three Tanzanian NGOs; Policy Forum, TGNP and TaTEDO, as well as a local employee representative of SNV. Policy Forum is Tanzania's premier network of civil society organisations that work to promote good governance. The Tanzania Gender Networking Programme (TGNP) is one of the country's most prominent women's rights organisations and is active on both national and local levels. TaTEDO works to promote access to renewable energy in rural Tanzania.

  The topic of the second meeting was the framework for private investments in the Tanzanian energy sector. The participants in this meeting included two important national Tanzanian industry groups, Rajani Group and Sumaria Group, as well as a representative of the Tanzania Chamber of Commerce, Industry and Agriculture. One of the participants also represented the Confederation of Tanzanian Industries (CTI), which is an interest organisation for Tanzanian industry. CTI plays an important role in negotiations with the government on investment policy.

- Interview with Sam Wangwe, head of the Tanzanian research institute Policy Research for Development (REPOA) and Dr. Suma Kaare, who has broad expertise within capacity development with experience from academia, public and private sectors and civil society.

As regards the Norwegian partners TANESCO and the REA, the project group met with representatives at different levels in the organisations. Three interviews were carried out at TANESCO with both management and employee representatives. The employee representatives are participants in Statnett's institutional cooperation with TANESCO. A group meeting was held at the REA with eight representatives from both management and the employees.

All minutes of interviews from Tanzania that were used in the report have been confirmed.

2.2 Audit question 1: To what extent does Norwegian development assistance improve access to clean energy?

This audit question has been answered by the list of questions to the embassies and analysis of Norad's *Norwegian Aid Statistics*. The audit question has also been elucidated with an analysis of project documentation, national statistics from Tanzania, as well as interviews with partners and the Norwegian embassy in Tanzania. The Norwegian Water Resources and Energy Directorate was interviewed in Norway.

In their responses to the list of questions, the embassies list the projects they have funded within power generation, and how much power these projects have generated. The embassies also list projects within development of main and distribution grids that have received funding, and how many new power connections this has led to.

Sections 4.2 and 4.3 of the report refer to amounts based on an analysis of the project descriptions in *Norwegian Aid Statistics*. With a basis in generation sub-categories[7], the projects are categorised as "National generation/upgrades", "Local generation", "Feasibility studies" and "Other". The projects are categorised based on the project

7) Categories: Power generation/renewable sources; Hydro-electric power plants; Geothermal energy; Solar energy; Wind Power; Ocean power and Biomass.

group's evaluation of the project descriptions. In the sub-category for main and distribution grids, projects are categorised as "Grid expansion" or "Other".

Power generation data were obtained from the power company TANESCO, the Tanzanian Ministry of Energy and Minerals, annual sectoral reviews undertaken under the auspices of the donors and various research reports. Access to electricity has also been analysed using data from the National Household Survey prepared by Tanzania's National Bureau of Statistics.

The Ministry of Foreign Affairs' efforts to trigger private investments have been investigated through interviews, document analysis and statistics. Interviews have been carried out with the Ministry's Department for Regional Affairs and Development and with Norfund. A focus group meeting was held with private investors in Tanzania. Norfund's activity reports and governing documents have also been subject to document analysis. Information about Norfund's investments was obtained from Norad's *Norwegian Aid Statistics* and Norfund's own publications.

The audit has furthermore used information from international reviews of investment climates:

- The World Bank's annual *Ease of doing business* ranking quantifies how countries are geared toward facilitating business activities – based on indicators such as access to capital and electricity, how easy it is to obtain necessary permits, tax level and contract enforcement.

- The World Economic Forum's annual *Global Competitiveness Report* ranks a country's global competitiveness based on 12 indicators, including national institutions, macroeconomic conditions, infrastructure and labour market regulations.

- The *Business Surveys* questionnaires, which are also implemented by the World Bank, provide responses from a larger number of businesses as to what they believe are the greatest obstacles to conducting business activities in the country.

2.3 Audit question 2: To what extent has Norwegian development assistance to clean energy benefited the poor?

This audit question has been answered with the list of questions to the embassies in the core countries. Project evaluations and previous evaluations of Norwegian energy aid have also been reviewed. The audit question has also been elucidated with an analysis of project documents and national statistics from Tanzania, interviews with the Norwegian embassy in Tanzania, domestic partners and other donors. A focus group meeting has been held with representatives from civil society in Tanzania with the topic "Energy and poverty", in order to obtain background information.

Relevant literature and reports on the poor's access to energy have been reviewed.[8] Norad's *Norwegian Aid Statistics* have also been used to map the scope of projects aimed at the poor. Generation and distribution projects at the local level are particularly relevant to this audit question.

Data showing poor households' access to electricity in Tanzania has been obtained from national household surveys carried out by Tanzania's National Bureau of Statistics. *Household and Budget Surveys* (2007) have been used to analyse access to electricity distributed by income level. The data has been supplemented with an

8) See e.g. Bernard (2012), UNDP (2009), the World Bank (2009) and IEA (2011).

analysis of data from *Demographic and Health Surveys* (2004/05 and 2010), which also contain information about energy consumption.

2.4 Audit question 3: To what extent does Norwegian development assistance to clean energy contribute to sustainable power supply?

The audit question was primarily answered through an in-depth analysis of an institutional cooperation in Tanzania. Evaluations of a selection of institutional cooperation projects in the core countries were also reviewed. The audit question has also been investigated through interviews with the Ministry of Foreign Affairs, Norad and the embassy in Tanzania.

Project documents from the institutional cooperation in Tanzania have been analysed. The Norwegian and Tanzanian partner institutions, as well as participants in the training programmes in Tanzania, have been interviewed. Other donors in Tanzania, Sida, the World Bank and Millennium Challenge Corporation, have contributed useful additional information through interviews.

In their responses to the list of questions, the embassies list the most important results and experience from capacity development projects. Relevant literature and evaluations of Norwegian aid for capacity development and the energy sector have also been used to identify important success factors for capacity development projects.

2.5 Audit question 4: To what extent does the Ministry of Foreign Affairs, through its overall administration, ensure that the goals for development assistance to clean energy are achieved?

This audit question was answered using document analysis of the embassies' strategic plans and activity plans, the Ministry of Foreign Affairs' allocation letters to the embassies, minutes from energy adviser meetings and plans for the Clean Energy for Development Initiative. Energy advisers at Norwegian embassies have held regular energy adviser meetings since 2009. The energy advisers, who have professional responsibility for energy aid at the embassies, and representatives from Norad, the Ministry of Foreign Affairs in Oslo, NVE and Norfund meet to e.g. discuss technical issues and results of the development assistance to clean energy. Interviews were also conducted with the embassy in Tanzania, the Ministry and Norad.

In their responses to the list of questions, the embassies describe their dialogue with and guidelines from the Ministry of Foreign Affairs. The embassies also account for their priorities within development assistance to clean energy and the basis for these priorities.

3 Audit criteria

3.1 Access to energy is a precondition for economic growth and social development

One key goal of Norwegian development assistance is to reduce absolute poverty[9] and lift people out of poverty on a lasting basis. This was established by the Standing Committee on Foreign Affairs in Recommendation No. 93 (2004–2005) to the Storting in its discussion of Report No. 35 (2003–2004) to the Storting *Fighting Poverty Together.* In the same recommendation, the majority of the Standing Committee on Foreign Affairs referred to the UN Millennium Development Goals as the central instrument for mobilising the global fight against poverty. In its discussion of Report No. 13 (2008–2009) to the Storting *Climate, Conflict and Capital*, the Standing Committee on Foreign Affairs emphasised that the UN Millennium Development Goals play an important role in Norwegian development policy, and that a unanimous committee has repeatedly confirmed that aid for implementing the Millennium Development Goals will be prioritised in Norwegian development cooperation, cf. Recommendation No. 269 (2008–2009) to the Storting.

UN Millennium Development Goal 7 involves ensuring environmentally sustainable development. Report No. 35 (2003–2004) to the Storting referred to the fact that the energy sector accounts for a significant share of global greenhouse gas emissions, and that the need for a significant reduction in emissions of greenhouse gases therefore places special requirements on the energy sector.[10] The white paper furthermore refers to the fact that Norway, as an important energy nation, bears special responsibility for promoting an energy policy based on the goal of sustainable development. Through Recommendation No. 93 (2004–2005) to the Storting, the Standing Committee on Foreign Affairs established that sustainable development, including renewable energy, would be among the key areas in Norwegian development cooperation in subsequent years. In the white paper *Sharing for prosperity* (Meld. St. 25 (2012–2013)), the Government emphasised that it would work to ensure that sustainable access to energy for all is a key element within the sustainability goals to be negotiated in the UN leading up to 2015.

Measures for environmentally friendly energy management, efficient energy consumption and environmentally friendly energy carriers, as well as measures that promote cleaner generation, have been prioritised in Norwegian aid for many years.[11] This was emphasised by the majority in the Standing Committee on Foreign Affairs in Recommendation No. 269 (2008–2009) to the Storting, and the Committee reiterated this point in its discussion of the white paper *Towards greener development* (Meld. St. 14 (2010–2011)), cf. Recommendation 445 (2011–2012).

According to the Standing Committee on Foreign Affairs, the increased efforts in the energy sector through the Clean Energy for Development Initiative of 2007 will include measures aimed at poverty reduction, such as rural electrification with solar energy, more efficient wood-burning stoves and better charcoal production. The Clean Energy for Development Initiative will also be geared toward the development of

9) The United Nations definition of absolute poverty is severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. The World Bank defines absolute poverty as "living on less than USD 1.25 (approx. NOK 8) per day". Source: United Nations Association of Norway.
10) Report No. 35 (2004–2005) to the Storting *Fighting Poverty Together,* p. 122.
11) Proposition No. 1 (1999–2000) to the Storting – Ministry of Foreign Affairs, p. 23, Proposition No. 1 (2001–2002) to the Storting – Ministry of Foreign Affairs, p. 27, Proposition No. 1 (2003–2004) to the Storting – Ministry of Foreign Affairs, p. 67 and Proposition No. 1 (2005–2006) to the Storting – Ministry of Foreign Affairs, p. 20.

hydropower, wind and solar farms to generate power for the grid, cf. Recommendation No. 269 (2008–2009) to the Storting.

3.2 Development assistance to clean energy must also reach the poorest consumers

Access to clean energy at a reasonable price is an important input factor in the fight against poverty.[12] It is therefore an important goal to develop infrastructure to transmit energy to consumers – even in the poorest regions. The Standing Committee on Foreign Affairs has pointed out on multiple occasions that it is important to consider projects other than hydropower projects to ensure that the poorest consumers benefit from energy programmes. In its discussion of Report No. 13 (2008–2009) to the Storting *Climate, Conflict and Capital,* the majority of the Committee referred to the fact that Norwegian aid, in addition to its focus on hydropower where the preconditions are favourable, must increasingly focus on solar energy and wind farms in partner countries in Sub-Saharan Africa. This applies especially where the climate and sparse population make it difficult for the poor in rural areas to access other sources of renewable energy. This is reiterated in the Committee's discussion of Report No. 15 (2008–2009) to the Storting *Interests, Responsibilities and Opportunities*, in which the majority of the Committee stated that Norway should promote development of new renewable energy, for example wind and solar energy. Increased focus on renewable and new renewable energy may help create more energy security, including in poor developing countries. During its discussion of the white paper *Towards greener development* (Meld. St. 14 (2010–2011)), the Committee believed that small and medium-sized projects within renewable energy should also be prioritised, since they contribute strongly toward reduced poverty, cf. Recommendation 44 S (2011–2012). Furthermore, the majority of the Standing Committee on Foreign Affairs pointed out that energy is not only necessary for industry and commercial trading, but also for providing the general population with access to the internet and communication services.

3.3 A sustainable energy sector demands high levels of competence and strong institutions

In its annual budget resolutions, the Ministry of Foreign Affairs has pointed out that in Norway's aid cooperation with African countries, particular attention has been devoted to capacity development and transfer of expertise in areas where Norway has relevant expertise.[13] Proposition No. 1 (2004–2005) to the Storting recognised that contributions toward capacity building and institutional development in developing countries will be an important aspect of the long-term development cooperation, regardless of channels and budget items. Norway has particular expertise within areas such as legislation, energy sector organisation, licensing systems, systems for planning that safeguard financial and environmental considerations, as well as partnerships with neighbouring countries.[14]

In Recommendation No. 269 (2008–2009) to the Storting, the Standing Committee on Foreign Affairs pointed out that it is important to ensure that aid for capacity development is designed to support the recipient's ownership of their own development.

12) Report No. 35 (2004–2005) to the Storting *Fighting Poverty Together,* p. 122.
13) Proposition No. 1 (2006–2007) to the Storting – Ministry of Foreign Affairs, p. 83, Proposition No. 1 (2007–2008) to the Storting – Ministry of Foreign Affairs, p. 96, Proposition No. 1 (2008–2009) to the Storting – Ministry of Foreign Affairs, p. 116, Prop. 1 S (2009–2010) Proposition to the Storting (draft resolution) – Ministry of Foreign Affairs, p. 118, Prop. 1 S (2010–2011) Proposition to the Storting (draft resolution) – Ministry of Foreign Affairs, pp. 46 and 137 and Prop. 1 S (2011–2012) Proposition to the Storting (draft resolution) – Ministry of Foreign Affairs, p. 116.
14) Proposition No. 1 (2006–2007) to the Storting – Ministry of Foreign Affairs, p. 29.

The poorest developing countries face major challenges in developing new expertise, institutions and regulations. By developing capacity in the partner countries' energy and planning authorities, Norway helps facilitate the design of sound national development strategies.[15]

3.4 Public involvement is necessary in order to trigger private investments in the energy sector

Industrial development is an important part of development policy and the eradication of poverty. The Standing Committee on Foreign Affairs emphasised this fact in Recommendation No. 93 (2004–2005) to the Storting. One focus area is leveraging investments to establish small and medium-sized businesses. Norfund is an important policy instrument in this connection.

According to Report No. 13 (2008–2009) to the Storting *Climate, Conflict and Capital*, the terms for energy investments have improved significantly in many poor countries in recent years, and many developing countries can provide a politically stable framework for investors. Nevertheless, energy projects are complex, and the risk is greater in developing countries than in wealthier countries. Significant public involvement is therefore required to stimulate private investments.

In Recommendation 44 S (2011–2012) to the white paper Meld. St. 14 (2010–2011), the Standing Committee on Foreign Affairs noted that Norway can contribute toward financing technology transfer within the areas of renewable energy generation and efficient energy consumption, with a view towards triggering large-scale private investments. According to Proposition 1 S (2010–2011), the Government wanted to increase its efforts to trigger investments in renewable energy by using development aid funds strategically, give Norfund latitude to further develop its investments in businesses in developing countries and generally stimulate the use of Norwegian expertise to make pro-development investments in poor countries. The use of Norfund as a policy instrument to promote private investments in the energy sector in the least developed countries has been emphasised by the Government since the early 2000s.[16]

3.5 Development assistance must be based on the partner countries' own priorities

Norway acceded to the Paris Declaration on Aid Effectiveness in 2005. The subsequent Accra Agenda for Action in 2008 emphasises the importance of aid being based on national development plans that reflect the partner country's desires and needs.

As all other development cooperation, the focus on clean energy is subject to international development policy obligations. The partner country must own its own development agenda, and the aid must be based on a division of labour and coordination between donors.[17]

Norway's bilateral contributions must be based on demand and founded on the countries' own plans and priorities.[18] The demand is often geared toward hydropower, which is the sector where Norwegian industry has the most to offer, the most

15) Prop. 1 S (2010–2011) Proposition to the Storting (draft resolution) – Ministry of Foreign Affairs, p. 37.
16) See e.g. Proposition No. 1 (2001–2002) to the Storting – Ministry of Foreign Affairs, p. 65.
17) www.regjeringen.no/nb/dep/ud/dok/rapporter_planer/Planer/2007/ren_energi_utviklingsarbeidet.html?id=489316. (Norwegian only)
18) Report No. 13 (2008–2009) to the Storting, p. 51.

established expert environments and an industry that has shown an interest in participating in projects in developing countries.

In Recommendation No. 269 (2008–2009) to the Storting, the Standing Committee on Foreign Affairs also emphasised the continued standing of the established principles and guidelines concerning a rights-based approach, poverty orientation, recipient orientation, national ownership, concentration, untied aid, international division of labour and the agenda on aid effectiveness.

Report No. 35 (2003–2004) to the Storting *Fighting Poverty Together* states that one key aspect of international energy cooperation will be to identify focus areas within sustainable development that the developing countries themselves want to prioritise. The partner countries' authorities determine their own priorities for the energy sector and thus the areas where they need assistance. For Norway, it is important to ensure that Norwegian expertise in hydropower and other forms of energy is offered to the recipients, while the partner country itself chooses how to prioritise.

In Recommendation No. 93 (2004–2005) to the Storting, the Standing Committee on Foreign Affairs stated that it is important to ensure that national strategies for poverty reduction form the operative point of departure for Norwegian efforts at the country level. In Recommendation No. 269 (2008–2009) to the Storting, the Standing Committee on Foreign Affairs stated that Norway has consistently endeavoured to utilise all available relevant aid expertise in Norway. However, the majority is of the opinion that it is essential that the focus area is selected, and that the aid is designed based on the recipient country's needs and preconditions. The donor country's self-interest shall not determine the choice of focus countries or sectors.

In its discussion of the white paper *Towards greener development* (Meld. St. 14 (2010–2011)), the Committee's majority expressed that it may be relevant to utilise Norwegian special expertise in development efforts. The Committee also pointed out the importance of not reversing the trend towards a greater extent of recipient ownership in development policy, cf. Recommendation 44 S (2011–2012). Excessive emphasis on areas where Norwegian companies have expertise, may blur the line between aid and self-interest. It is crucial that development policy is founded on local ownership. The developing countries' own authorities and population know best as regards which needs are most important.

3.6 The Ministry of Foreign Affairs is responsible for goal attainment in aid efforts

The Ministry of Foreign Affairs has overall responsibility for administering Norway's long-term aid. The embassies are accountable for delivering results from the grant funds allocated through the Ministry's allocation letters. The embassies are expected to consult with Norad for satisfactory quality assurance in line with the requirements of the various programme regulations. The embassies must also ensure that the aid funds are used as planned, and carry out written appraisals of all contractual information they receive regarding progress in aid-supported activities. The routines in the Development Cooperation Manual were in effect until 1 March 2010. New guidelines for grant administration have been in effect for the Ministry and Norad from 1 January 2010 and for the embassies from 1 March 2010.[19]

19) The new guidelines are laid down in three manuals for grant administration: *Om å forvalte tilskudd selv* (Administering grants yourself) (2008), *Om å forvalte delegerte ordninger* (Administering delegated programmes) (2008) and *Om å etablere og å forvalte ordninger* (Establishing and administering programmes) (2008).

The Ministry of Foreign Affairs' development efforts are covered by the principle of goal and performance management in *the Regulations on Financial Management in Central Government* and the associated *Provisions on Financial Management in Central Government*. Chapter 1 of the Provisions states that the Ministry bears overall responsibility for ensuring that the organisation uses resources efficiently and reports relevant and reliable results information, in addition to ensuring that the supervision dialogue between the Ministry and the organisation can be documented. According to the Regulations, all central government administrative bodies must ensure that stipulated goals and results are achieved, and that sufficient documentation is available to make informed management decisions.

According to Section 4 of the Financial Management Regulations, the Ministry of Foreign Affairs must ensure that the reporting and results of the aid are in line with stipulated standards. Systematic follow-up of Norwegian development aid funds is important to secure goal attainment. The Development Cooperation Manual points out that the embassies must be active partners and, in close dialogue with partner countries and other donors, follow up to ensure that a given measure's results are in line with defined goals. The embassies must document assessments of progress and results.

In Budget Recommendation No. 3 (2007–2008) to the Storting, the Storting emphasised the need for goal-oriented and effective control of development aid funds, regardless of which entities the aid is channelled through. The embassies must also assess whether the funds are used as intended, and whether the obligations under the agreement are complied with.

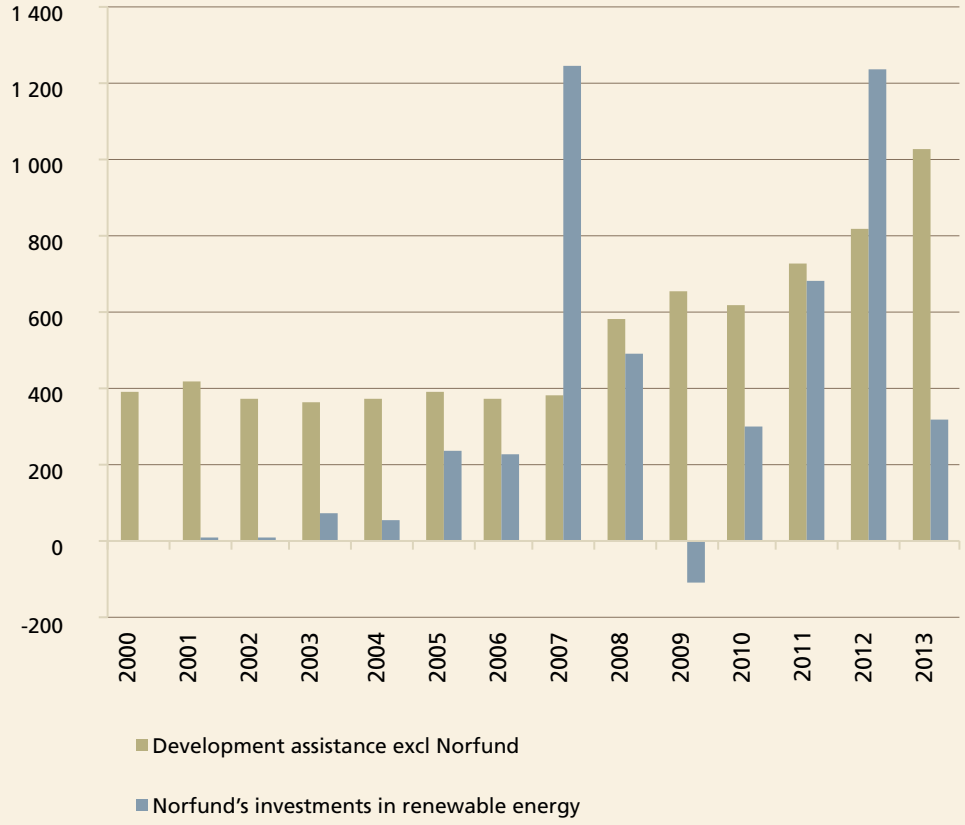
In its discussion of Report No. 13 (2008–2009) to the Storting *Climate, Conflict and Capital,* the Committee stated that development in poor countries requires comprehensive and coherent use of policy instruments. The Committee confirmed the importance of making the aid more goal-oriented and strategic, cf. Recommendation No. 269 (2008–2009) to the Storting.

4 Results of Norwegian development assistance to clean energy

4.1 Introduction to development assistance to clean energy

Norwegian development assistance to energy amounted to NOK 12.26 billion in the period 2000–2013, of which NOK 8.97 billion was disbursed after the Clean Energy for Development Initiative was launched in 2007.[20] The figure below shows the development in development assistance to clean energy from 2000 to 2013.

Figure 1 Development assistance to clean energy and Norfund's investments in renewable energy during the period 2000–2013 (in NOK million)*



* When Norfund sells off or divests its investments, the income from the sale is recorded as a negative figure in aid reporting to OECD DAC. In 2009, Norfund sold down its ownership interest in SN Power Invest from 50 to 40 per cent. The sale provided Norfund an income of approx. NOK 270 million, which explains the negative result in the diagramme. If the selldown in SN Power is excluded, Norfund's investments in renewable energy in 2009 totalled NOK 163.4 million. In 2007, Norfund, through SN Power, made a major investment in Peru, where Norfund's share amounted to about NOK 800 million. This means that the fund's 2007 investments were much higher than average.

Source: Norad's *Norwegian Aid Statistics* database

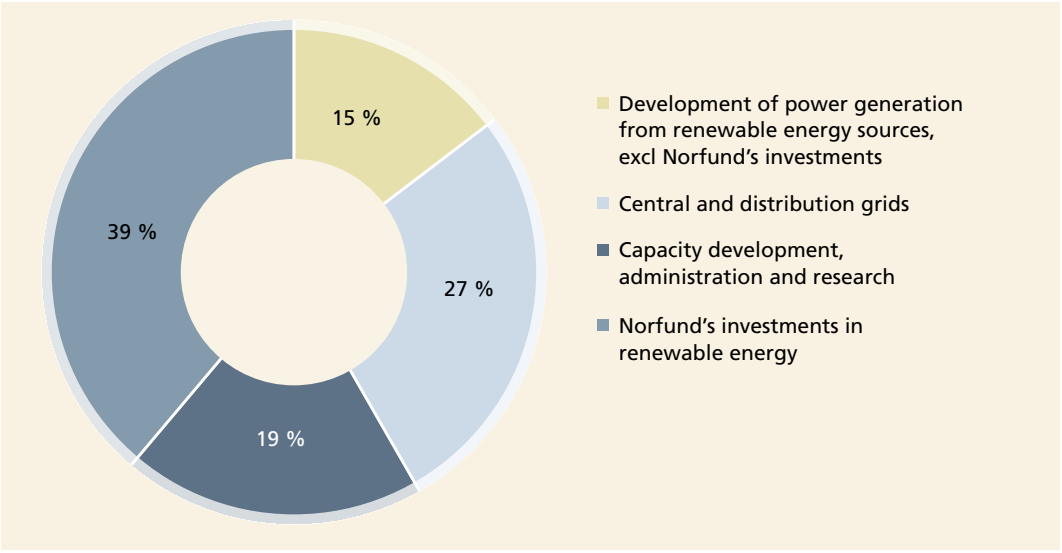
Figure 1 shows that the aid has increased steadily since the Clean Energy for Development Initiative started in 2007. The Norwegian Investment Fund for Developing Countries, Norfund, markedly increased its investments in renewable energy during this period.[21] Norfund's investments in renewable energy amounted to approx. NOK 4.76 billion during the 2000–2013 period, which corresponds to 39 per cent of total Norwegian development assistance to clean energy during this period. During the

20) Norad's *Norwegian Aid Statistics* database. The figures include DAC Code 230 ("Energy generation and supply).
21) Norad (2012), *Energy for sustainable development. Annual report 2012*, p. 23.

2007–2013 period, Norfund's investments accounted for nearly half (46 per cent) of all Norwegian development assistance to clean energy.[22] The fund's investments count as aid, not the funds allocated annually by the Storting (see Section 5.6). The total amount allocated for development assistance to clean energy in 2013 amounted to more than NOK 1.3 billion. This is considerably less than in 2012, when Norfund's investments amounted to a larger share of the aid.

Until 2012, energy aid was distributed across 12 different budget chapters in the National Budget. According to Proposition 1 S (2012–2013), the increased focus on clean energy has amplified the need to more clearly demonstrate the connection between the use of resources and goal attainment. This warranted merging the grants into a single chapter item. As of 2013, the Ministry of Foreign Affairs therefore introduced chapter item 166.74, which is a catch-all for grants for renewable energy and energy efficiency.[23]

Figure 2 Development assistance to clean energy during the 2000–2013 period, by type of measure*



* The category "Renewable power generation" includes the sub-categories Power generation / renewable sources, Hydroelectric power plants, Solar energy, Geothermal energy, Wind Power and Biomass. The category "Capacity building, administration and research" includes Energy policy and administrative planning, Energy education and Energy research.

Source: Norad's *Norwegian Aid Statistics* database

Figure 2 shows that aid is generally geared toward three focus areas: support for developing renewable power generation, which includes local solutions not connected to the main grid, such as solar panels and mini-hydropower plants; support for developing main and distribution grids; and support for capacity building in order to strengthen institutions and framework in the energy sector in developing countries. This is in addition to Norfund's investments in renewable energy.

The Ministry of Foreign Affairs emphasised that the majority of energy aid is centred on social and economic development, and that the objective of the aid is therefore broader than increasing access to energy for the poor segment of the population. Aid for increased power generation and improved access to energy is therefore, by facilitating increased commercial activity and employment, expected to contribute toward economic growth that also benefits the poor. Access to energy can also affect

22) Norad's *Norwegian Aid Statistics* database.
23) Prop. 1 S (2012–2013) Proposition to the Storting (draft resolution) – Ministry of Foreign Affairs, p. 194.

individuals in the form of better welfare services within e.g. education and health, and through access to lighting and domestic electrical appliances.

The Ministry of Foreign Affairs pointed out that, in order to extend distribution lines and connections to households, transmission lines must first be built to transport the electricity.

The Ministry stated in an interview that the aid efforts prioritise the stimulation of private investments because development aid and public investments alone cannot satisfy the investment needs in the energy sector in developing countries. In close connection with this, the Ministry has also seen the need for competent and well-managed institutions that can facilitate and negotiate with the desirable private actors. Capacity building is therefore a prioritised policy instrument.

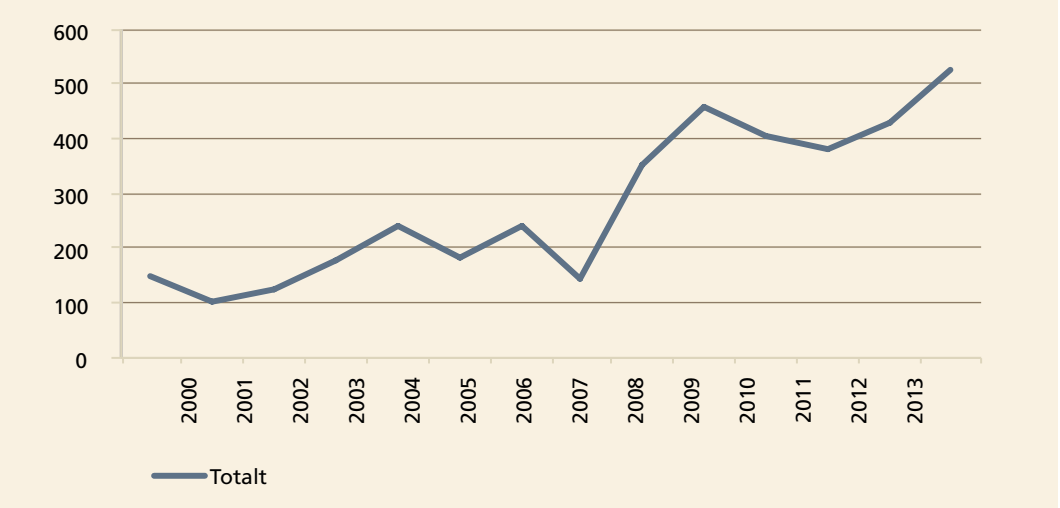
Solar panels are examples of local solutions not connected to the power grid, but which provide access to power for households. The photo is from a Norwegian-funded project in Nepal.

Photo: Alternative Energy Promotion Centre

4.1.1 Aid to the core countries

During the period of 2000–2013, NOK 3.91 billion was given in development assistance to clean energy in the core countries Mozambique, Tanzania, Uganda, Ethiopia, Liberia, Nepal and East Timor. Since the launch of the Clean Energy for Development Initiative in 2007, the core countries have received NOK 2.69 billion in aid for this purpose. This amounts to 30 per cent of the total Norwegian development assistance to clean energy during the period of 2007–2013.

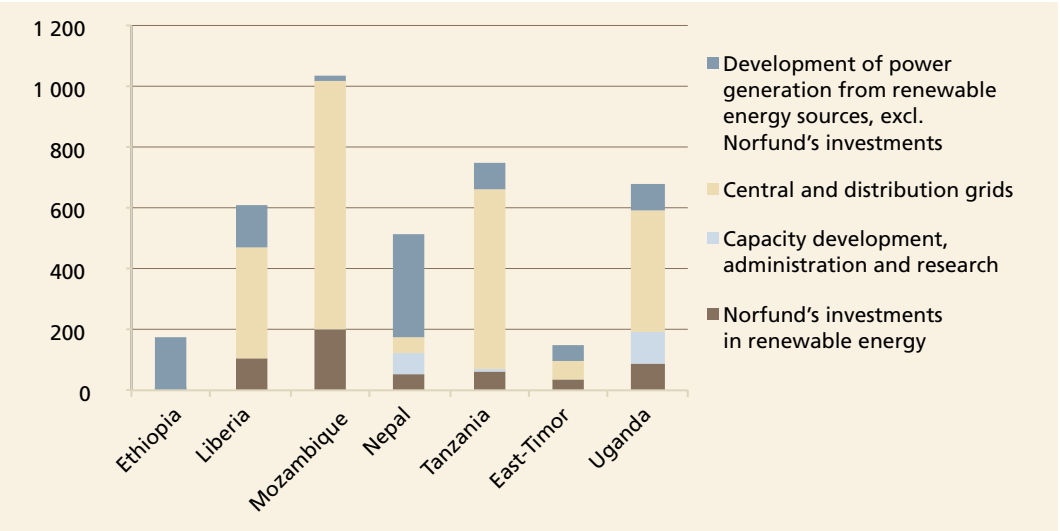
Figure 3 Annual development assistance to clean energy in the core countries during the 2000–2013 period (in NOK million)



Source: Norad's *Norwegian Aid Statistics* database

Figure 3 shows that development assistance to clean energy in the core countries has more than doubled following the launch of the Clean Energy for Development Initiative in 2007. The aid has been between NOK 350 and 550 million annually during the 2008–2013 period. Figure 4 shows how this aid has been distributed among different types of measures during the 2000–2013 period.

Figure 4 Development assistance to clean energy in the core countries during the 2000–2013 period, by type of measure (in NOK million)*



* The category "Renewable power generation" includes the sub-categories Power generation / renewable sources, Hydroelectric power plants, Solar energy, Geothermal energy, Wind Power and Biomass. The category "Capacity building, administration and research" includes Energy policy and administrative planning, Energy education and Energy research.

Source: Norad's *Norwegian Aid Statistics* database

Figure 4 shows that there are significant differences in how much aid the core countries received during this period. While Mozambique received more than NOK 1 billion for clean energy, Ethiopia and East Timor received relatively modest amounts; less than NOK 200 million each during the 2000–2013 period. In its response to the list of questions, the embassy with responsibility for East Timor stated that the

cooperation on clean energy had concluded because the authorities no longer prioritise clean energy.

The figure also shows that aid to the core countries in the 2000–2013 period was dominated by support for the development of main and distribution grids. In Nepal, a significant share of the aid was spent on a programme that supports small-scale power generation and clean-burning cook stoves. In Ethiopia, the funds were largely spent on feasibility studies for potential hydropower plants. Norfund's investments mainly cover two hydropower plants in Uganda and Nepal.[24]

4.1.2 Aid to Tanzania

During the 2000–2013 period, Norwegian development assistance to clean energy in Tanzania totalled approximately NOK 750 million. About NOK 550 million was given during the 2007–2013 period. A large share of the aid was given for the construction of a subsea interconnector, as well as the development of main and distribution grids on Zanzibar. In 2013, the Ministry of Foreign Affairs entered into an agreement with the Government of Tanzania to provide NOK 700 million in aid over a period of five years for rural electrification. Nearly NOK 120 million of this aid was disbursed in 2013.

The energy sector in Tanzania has both low generation capacity and a poorly developed power grid. The annual electricity consumption is about 92 kWh per citizen, less than 0.5 per cent of the consumption per citizen in Norway.[25] According to the National Household Survey from 2012, 18 per cent of Tanzanian households are connected to the power grid. Sixty-eight per cent of households in Dar es Salaam are connected to the grid. In other cities, the percentage is 36, while four per cent are connected in rural areas. The power supply is frequently unstable, and is periodically rationed due to power shortages. This has led large and medium-sized businesses to install generators to ensure their access to power. Nearly half of all Tanzanian businesses own their own diesel generator.[26] Lack of access to power is cited by Tanzanian businesses as the greatest obstacle by far to engaging in business activities (see Table 1 p. 31).

In 2008, the Government of Tanzania prepared an overall plan for the energy sector.[27] The plan includes forecasts of future demand for, and consumption of, power, and concrete plans for how this need will be met with development of both production and distribution of power. The national development strategy MKUKUTA II[28] from 2010 lists a number of quantified goals for the sector (see Box 1). The strategy also lists measures to be prioritised, with construction of new power plants, development of new renewable energy, rural electrification and expansion and strengthening of the main grid as the four items with the highest priority. The *Big Results Now!* initiative was launched in 2013, with energy as one of six prioritised sectors with the aim of making Tanzania a middle income country by 2025. The primary goal is initially to double the production capacity and power deliveries from 2013 to 2015, and to achieve 600,000 new power connections.[29]

24) Norad's *Norwegian Aid Statistics* database.
25) World Bank Development Indicators. Source: http://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC.
26) Government of Tanzania (2012) *Long term perspective Plan – Roadmap to a Middle Income Country*.
27) The Republic of Tanzania Ministry of Energy and Minerals (annual) *Power Sector Master Plan*.
28) Tanzania Ministry of Finance and Economic Affairs (2010) *National Strategy for Growth and Reduction of Poverty: MKUKUTA II*.
29) Source: http://www.mem.go.tz/Portals/0/EasyDNNNewsDocuments/1062/0064_28062013-Energy_Lab_Report_on_Priority_Projects_Under_Big_Results_Now_Initiative[1].pdf.

Box 1 Goals for the Tanzanian energy sector

Goals for the Tanzanian energy sector in MKUKUTA II:

- Increase power generation from 1064 MW in 2010 to 1722 MW in 2015
- Increase the use of new renewable energy (not hydropower) from 4 per cent in 2010 to 6 per cent in 2015
- Double the total length of main and distribution grids from 2010 to 2015
- Increase access to electricity in rural areas from 2 per cent in 2010 to 6 per cent in 2015, and nationally from 14 per cent in 2010 to 18 per cent in 2015
- Increase access to clean alternatives to wood-burning from 10 per cent in 2010 to 20 per cent in 2015

Source: Tanzania Ministry of Finance and Economic Affairs (2010) *National Strategy for Growth and Reduction of Poverty II*

4.2 Norwegian aid for power generation

Planning, facilitation and direct support for building energy infrastructure is a focus area within development assistance to clean energy.[30] Norwegian aid to renewable power generation goes primarily to the development of hydropower, and only marginally includes generation from other renewable energy sources such as wind and solar energy.[31] According to the Ministry of Foreign Affairs, technological developments provide far greater opportunities for utilising solar power on a major scale in 2014 than in the early 2000s.

According to Norfund, there are vast hydropower resources in Sub-Saharan Africa, but only 5 per cent of the continent's hydropower potential has been developed.[32] Many Norwegian companies have specialised in constructing hydropower plants and have thus developed internationally recognised technical expertise in this area. Norway is the world's sixth largest hydropower producer, with 120 years' experience from the sector. The Ministry of Foreign Affairs therefore considers hydropower to be an area where Norway has a comparative advantage.

4.2.1 Results of Norwegian aid for developing and upgrading power plants

In 2000–2013, just over NOK 270 million was granted to build or upgrade power plants in the seven core countries.[33] Investments from Norfund come in addition.

In Uganda, the embassy, in addition to providing support for the construction of a 50 MW oil-fired power plant, supported the development of a 40 MW turbine at the Kiira hydropower plant. According to the embassy, the plant generated 1253 GWh in 2000–2013. In Nepal, the embassy supported the upgrading of a power plant that produces up to 50 GWh annually. In Liberia, the embassy is supporting the upgrading of the Mount Coffee hydroelectric plant, which will have a production capacity of 70–80 MW. The embassy has also supported diesel generators to boost power supply in the capital, Monrovia.

In East Timor, support was provided for a mini-hydropower plant, but the plant has been out of operation for long periods, partly because of repeated landslides and technical problems. According to the embassy, the plant has consequently produced

30) Ministry of Foreign Affairs and Norad (2007), *Plan for the Clean Energy for Development Initiative,* p. 3; Ministry of Foreign Affairs and Norad (2009) *Action Plan 2009–2012*, p. 6.
31) Norad's *Norwegian Aid Statistics* database.
32) Norfund (2010) *Report on Operations*, p. 6.
33) This calculation is based on project descriptions in Norad's *Norwegian Aid Statistics* database. For Norfund's investments, see Section 5.2.2.

very little power since it was built. The Ministry of Foreign Affairs stated that the plant was in operation during the annual meeting in 2014.[34] In Tanzania, the embassy supported the construction of the Kihansi hydropower plant and upgrading of the country's hydroelectric plants. The projects in Tanzania are described in more detail below.

The Ministry of Foreign Affairs supports the reconstruction of Mount Coffee hydropower plant in Liberia, which largely destroyed during the first civil war in the early 1990s. The power plant is scheduled recommence operation in 2015. Photo: Anders Tørklep/Norplan

In two of the core countries, Ethiopia and Mozambique, the Ministry has not provided support for new national production of renewable energy or upgrading of existing power plants.

A review of the project descriptions in Norad's aid statistics shows that in the period after 2005, less direct support has been given for the development of new power plants in the core countries than in previous years. In recent years, the embassies have facilitated production through support for feasibility studies and facilitating private investment.

Norwegian aid facilitates development projects through support for feasibility studies. Feasibility studies are conducted to assess whether a planned investment can be realised, and they include an analysis of the market, as well as factors related to technology, investment and the environment. [35] In 2000–2013, approximately NOK 190 million was spent on feasibility studies for potential power generation.[36]

As of March 2014 two power plants are under development where Norwegian-supported feasibility studies were previously carried out: Isimba in Uganda and Upper Tama Koshi in Nepal. The power plants have a planned total production capacity of 675 MW. Norconsult currently has a contract for construction management of Upper Tama Koshi together with the German company Lahmeyer.

A majority of the feasibility studies carried out in 2000–2013 have yet to result in the development of power plants. These include feasibility studies for four large hydropower projects in Ethiopia, small and medium-sized hydropower plants in Nepal and mini-hydropower plants in Tanzania. Many of the development projects for which feasibility studies have been carried out are still part of the various countries' development plans. The feasibility studies were, however, carried out several years ago. In Uganda, Norfund and TrønderEnergi have done feasibility studies of two hydropower plants, but according to Norfund, neither of these is currently under development.

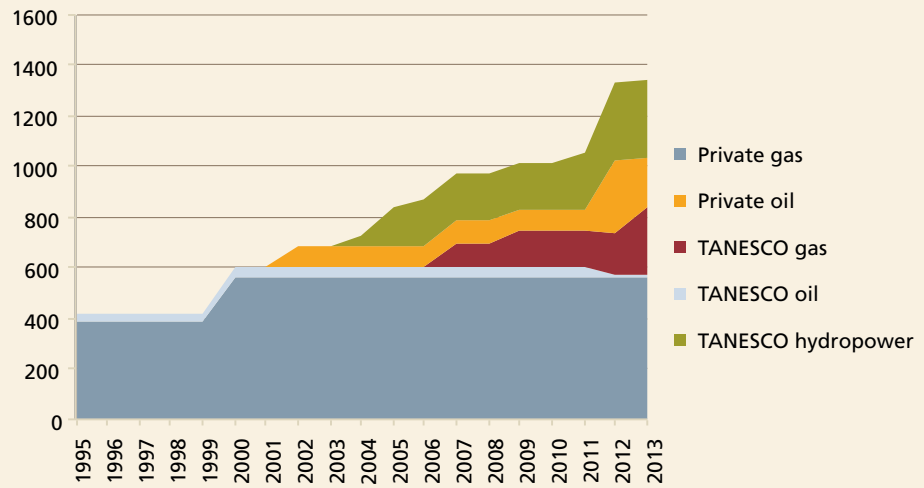
34) The embassies' response to the list of questions and Norad's *Norwegian Aid Statistics* database.
35) Norad.no: Funding for feasibility studies. Retrieval date 18 February 2014.
36) This calculation is based on project descriptions in Norad's *Norwegian Aid Statistics* database.

Norwegian support to national power generation in Tanzania

Development in national power generation in Tanzania

The state-owned Tanzania Electric Supply Company (TANESCO) is responsible for production, operation of the main grid, transmission, distribution and virtually all sales to end users. While private power producers have gained access to the market in recent years, TANESCO has exclusive rights to purchase and resell electricity.[37] TANESCO owns five major hydroelectric plants and two gas-fired power plants. Tanzania currently has an installed power generation capacity of about 1,340 MW, more than three times as much as in 1995. However, 415 MW of this consists of emergency plants with production based on heavy fuel oil and diesel. According to the Ministry of Foreign Affairs, these facilities will be closed as quickly as possible.

Figure 5 Production capacity (MW) in Tanzania from 1995 to 2013



Source: Joint Energy Sector Working Group (2011; 2012) *Joint Energy Sector Review* 2011 and 2011/12, and TANESCO's website

Figure 5 shows that hydropower is the largest source of energy, and that capacity has increased due to the development of oil and gas-fired power plants. Since 2001, the national power company TANESCO has been able to enter into contracts with commercial private power producers. This has resulted in a change in both the ownership structure and composition of energy sources in the country's power sector (see Figure 6). In 2013, private companies owned 37 per cent of the total production capacity. While hydropower accounted for 90 per cent of production capacity in 2000, it now constitutes about 40 per cent.

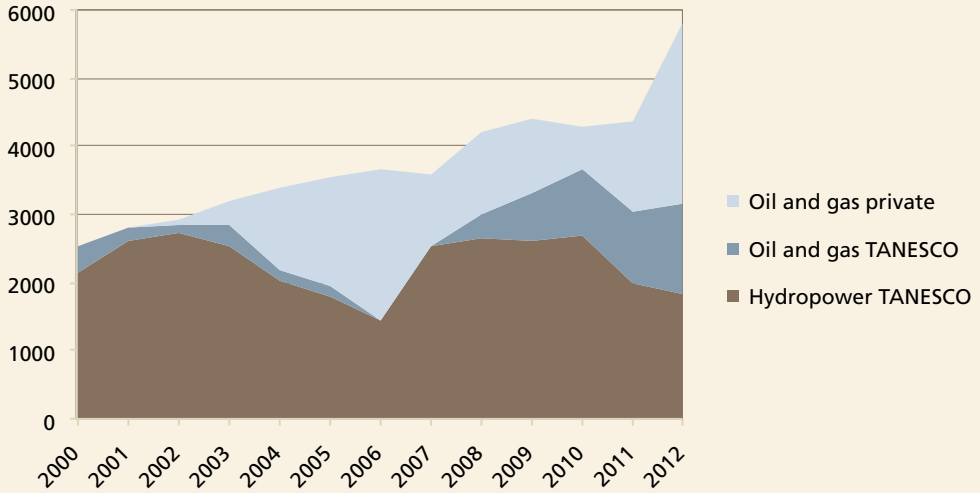
According to the Tanzanian authorities' plan for the energy sector, new gas-fired power plants with a combined capacity of nearly 2,000 MW will be built in 2014–2015.[38] This is more than double the current capacity, but some of today's expensive emergency supply power plants will probably be shut down.

How well the available capacity is used for power production depends partly on the availability of the energy source in question and maintenance of the power plant. During periods of drought, a hydropower plant may produce far less power than the maximum capacity implies due to empty reservoirs. Similarly, lack of maintenance can cause considerable energy loss when the power plant converts energy resources

37) One company, Songas, is a joint venture partially owned by the Tanzanian authorities.
38) Joint Energy Sector Working Group (2013) *Joint Energy Sector Review 2012/2013*, p. 12.

into electricity. Statistics on production[39] therefore provide important additional information about the energy authorities' ability to supply power.

Figure 6 Total power generation in Tanzania in 2000–2012 (GWh)



Sources: Joint Energy Sector Working Group (2012 and 2009) *Joint Energy Sector Review*; REPOA (2010) *The Potential for Job Creation and Productivity Gains Through Expanded Electrification*; statistics received from TANESCO; TANESCO's website; The United Republic of Tanzania Ministry of Energy and Minerals (2012) *Power Sector Master Plan update 2012*; US Energy Information Administration http://www.eia.gov/countries/country-data.cfm?fips=TZ&trk=m.

Figure 6 shows that the total power generation in Tanzania increased from just over 2,500 GWh in 2000 to just under 5,800 GWh in 2012. The increase in power generation comes solely from oil and gas production.[40] Production from hydroelectric plants has recently been very unstable, mainly due to more periods of drought than normal, especially in 2006 and in 2011–2012. In an interview, the embassy in Tanzania stated that many of the power plants are almost 40 years old, and that the authorities have placed a low priority on maintenance because of the poor economy.

In recent years, huge gas deposits have been discovered off the coast of Tanzania, which has made gas-fired power a main priority in the energy plans of the Tanzanian authorities. The Ministry of Energy and Minerals in Tanzania stated in an interview that reducing dependence on hydropower and oil-based power is a main goal, and that primarily natural gas and coal will contribute to this. New renewable energy sources, particularly wind power, solar power and geothermal power, will also be developed. The national targets are to increase the use of such energy sources by two percentage points, from 4 to 6 per cent during the period 2010–2015.[41] The Ministry of Foreign Affairs pointed out that while Tanzania's energy minister prioritises gas production higher than previous ministers, renewable energy is still part of the country's energy plans. Among other things, the Ministry pointed out that the Tanzanian authorities plan to build wind power capacity of 50–100 MW for production for the central grid, while hydropower and bioenergy will be prioritised as the cheapest alternatives for production for isolated grids.

In an interview, Norfund pointed out that the authorities in Tanzania expect that the supply of cheap gas will solve the country's power problems in the near future, and

39) Joint Energy Sector Working Group (2012) *Joint Energy Sector Review 2011/2012.*
40) Oil includes diesel, heavy oil and jet fuel.
41) The United Republic of Tanzania Ministry of Energy and Minerals (2011): *Medium term strategic plan 2012/13–2015/16*, p. 14, United Republic of Tanzania President's Office, Planning Commission (2012) *Long term perspective plan 2011/12–2025/26 – Roadmap to a middle-income country*, p. 71.

that this, according to Norfund, is undermining investment in renewable resources. A number of donors want to support clean energy, but according to the US development agency, the Millennium Challenge Cooperation, development of clean energy is not a key priority for the government.

Norwegian support for development of the Kihansi hydropower plant
The Kihansi hydropower plant was completed in 2000 and is the most recently opened state-owned hydropower plant in Tanzania. In 2012, it produced 588.2 GWh, one-third of Tanzania's total hydropower production.[42] Kihansi is also the latest big state-owned hydropower plant in Africa built with Norwegian aid. The plant has a capacity of 180 MW, 10 per cent of the country's total generating capacity. Construction was funded by the Ministry of Foreign Affairs, the Swedish International Development Cooperation Agency, the German development bank KfW, the European Investment Bank EIB, the World Bank and the Tanzanian authorities. The Ministry contributed a total of NOK 380 million in 1995–2002.[43] The power plant increased the national hydropower capacity in Tanzania by over 30 per cent and has been an important contribution to the total power generation in the country.

The Kihansi hydropower plant in Tanzania is the latest state-owned power plant in Africa built with the help of Norwegian development assistance. The power plant was completed in 2000 and accounted in 2013 for a third of Tanzania's hydropower production. Photo: Norplan

Norwegian support for emergency repairs of Tanzania's hydropower plants
In 2011, the embassy in Tanzania signed an agreement with TANESCO for necessary repairs of the nation's five largest hydropower plants. The agreement includes institutional cooperation between the Norwegian Water Resources and Energy Directorate (NVE) and TANESCO in the areas of assistance for repairing the power plants and training in this relation, capacity building in TANESCO and support and coordination

42) Information received from TANESCO.
43) Source: http://www.norad.no/no/resultater/kraftutbygging-ga-mer-energi.

from NVE.[44] In an interview, NVE stated that the project manager in TANESCO is part of the management team for hydropower generation, and that the manager actively contributes to the project's activities and reporting to the embassy. While the project initially had a budget of NOK 25 million, this has since increased to NOK 67.5 million due to a significant price increase for maintenance work and the expense for a hired consultant. The cost analysis was prepared in a feasibility study in 2009. It was, according to NVE, the basis of the original budget for the project, but turned out to be incorrect. The tenders that came in were over twice as high as the estimate. This is partly due to real inflation and partly because it was not sufficiently taken into account that the old power plants need spare parts that are no longer in production.[45] The embassy agreed on this basis to increase the budget to a total of NOK 67.5 million. Since the maintenance work has not yet begun, just NOK 2.3 million had been spent at 31 December 2013 on the project, mainly on courses.[46]

The maintenance work was advertised internationally as a single contract in March 2012, but resulted in one incomplete tender. It was then decided to split the invitation to tender into ten different contracts. Negotiations with the tender winners were held in the autumn of 2013.[47] Start-up of the maintenance work was thus delayed by almost two years.[48] NVE stated that at the time of the decision to split the contract into ten contracts, it was also determined that NVE would, on behalf of TANESCO, hire an external consultant with an engineering background to quality assure the work. This resulted in a NOK 7 million increase in the project budget.

The embassy in Tanzania stated in an interview that NVE does not have core competencies in upgrading power plants, but that it was chosen as the Norwegian partner on the basis of relevant experience with facilitating similar projects. In addition, NVE could be engaged on short notice without extensive and time-consuming tendering processes. NVE stated in an interview that they assist TANESCO in obtaining the necessary technical expertise for the project, and that in this connection, they have signed a framework agreement with the Norwegian power company Nord-Trøndelag Elektrisitetsverk (NTE). This is in addition to the consultant who is to follow up the agreements for TANESCO. NVE also pointed out that the embassy itself could have entered into consulting agreements directly, but that it wanted to take advantage of NVE's expertise in capacity development and project management. According to the Ministry of Foreign Affairs, the agreement with NTE has not yet been used in NVE's collaboration with TANESCO.

For there to be any long-term benefit of maintenance work, TANESCO must prioritise adequate maintenance. In an interview, NVE pointed out that TANESCO's failure to prioritise the maintenance of power plants over the past ten years raises questions. According to NVE, it is important to ensure the sustainability of the project to prevent a new application for support and maintenance in ten years' time. The embassy in Tanzania pointed out in an interview that TANESCO's financial crisis will continue to create uncertainty about whether required maintenance will be prioritised and executed. The embassy stressed that it still makes economic sense to finance the maintenance of power plants, because the power crisis in Tanzania will worsen if the hydropower plants break down due to decay.

44) Only the first part of the agreement is discussed here.
45) Interview with NVE on 12 September 2013 and TANESCO (2013) *Meeting with officials from Auditor General of Norway,* p. 3.
46) TANESCO/NVE (2013) *Capacity building and emergency repair project of existing hydropower plants in Tanzania. Annual progress report 2013*, p. 7.
47) TANESCO (2013) *Meeting with officials from Auditor General of Norway, p.* 2; TANESCO/NVE (2013): *Capacity building and emergency repair project of existing hydropower plants in Tanzania. Annual progress report 2013*, p. 5.
48) TANESCO/NVE (2013) *Capacity building and emergency repair project of existing hydropower plants in Tanzania. Annual progress report 2013*, p. 8.

Renovation of the Wesha power station on the island of Pemba (Zanzibar)
In connection with electrification projects in Zanzibar (see Section 4.3.2), NOK 17.4 million was granted to repair the 30-year-old Wesha diesel power plant on the island of Pemba. At that time, the plant was the sole source of power on the island, and repair of generators was considered necessary to ensure a stable power supply. According to Norad's final evaluation of the project, the repairs were delayed, which led to huge budget overruns, partly because the original manufacturer of the generators was the sole producer of spare parts.

Due to lack of maintenance and knowledge of the extent of the problems at the power plant, the generators were still not working as they should when the final evaluation of the electrification projects was prepared in 2009. By the time the projects were completed, a modern electricity grid had been built on Pemba. According to Norad's final evaluation of the project, there was, however, no stable power supply on the island before the Norwegian-supported subsea power cable was in place in 2010 (see Section 4.4.1). According to the same evaluation, the challenges at the power plant were underestimated and should have been foreseen. The Ministry of Foreign Affairs related that alternatives to repairing the old power station were considered. They were not prioritised because they would entail a large investment cost and because it was considered detrimental to invest in non-renewable technology when the subsea cable to Pemba was already under production.

4.2.2 Norwegian authorities' facilitation of private investment

According to the plan for the Clean Energy for Development Initiative, better national framework conditions for the private sector are a prerequisite for increasing private investment. With the exception of the embassy with responsibility for Liberia, all embassies in core countries state in their activity plans for the period 2007–2013 that they are working to improve the framework conditions for private actors through outreach and dialogue with national authorities.

Norwegian aid authorities have essentially two types of measures aimed at obtaining private investors in the energy sector and in developing countries in general. The Norwegian Investment Fund for Developing Countries, Norfund, contributes risk capital for specific investment projects. In addition, Norad's business schemes provide facilitation support for companies that want to invest in developing countries.

The investment fund Norfund is the most important instrument for attracting private capital in Norwegian development assistance. Norfund's investments in renewable energy accounted for NOK 4.76 billion in 2000–2013.[49] Through its investments, Norfund shall create viable, profitable activities that would otherwise not have been initiated because of high risk.[50] Norfund acts as a minority shareholder and cannot as a general rule have an equity stake of more than 35 per cent in a company.[51] The capital Norfund contributes is meant to reduce the risk enough so that a partner company will decide to make an investment that would not otherwise take place. After four to ten years, Norfund usually sells its stake in the company.[52] Norfund invests primarily in the form of equity, but also helps with loans.

Half of all new capital that the Ministry of Foreign Affairs supplies to Norfund must be invested in renewable energy.[53] The plan for the Clean Energy for Development Initiative states that the Ministry will work to find new forms of cooperation in order

49) Norad's *Norwegian Aid Statistics* database.
50) The Norfund Act (1997).
51) *Instruks for Norfund* (Instructions for Norfund) (2004).
52) Source: www.norfund.no. Retrieval date 29 January 2014.
53) Ministry of Foreign Affairs (2013) *Letter of Allocation No. 1/2013 Norfund,* p. 1.

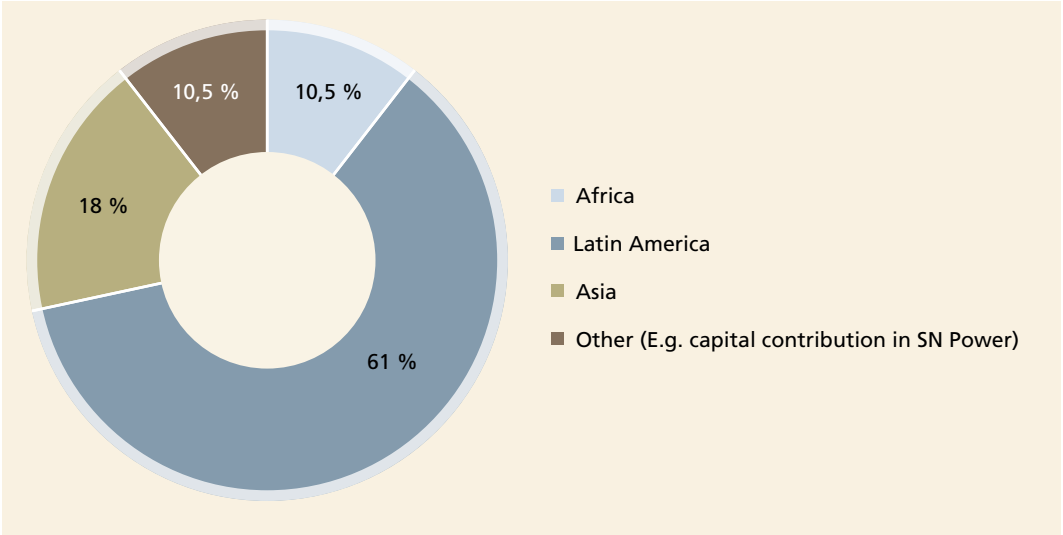
to strengthen the ability of the least developed countries, particularly in Africa, to attract investments from Norfund and other Norwegian investors. The 2007 plan for the Clean Energy for Development Initiative and 2009 action plan point out that Norfund is a key Norwegian investor in the energy sector in developing countries.

Norad supports feasibility studies and "Business Matchmaking" programmes in selected countries where contact and cooperation are facilitated between Norwegian and local companies. The support in 2000–2012 contributed just under NOK 10 million for core countries, mainly for feasibility studies.[54] In addition, Norad, together with Norfund, operates the Guidance Office for Commercial Development in Developing Countries, which provides professional advice and guidance to companies wishing to invest in developing countries.

Norfund's investments in renewable energy

Norfund invested NOK 500 million in renewable energy projects in Africa in 2000–2013. This represents 11 per cent of Norfund's investments in renewable energy.

Figure 7 Norfund's investments in renewable energy in 2000–2013, broken down by geographic regions



Source: Norad's *Norwegian Aid Statistics* database

Figure 7 shows the geographic distribution of Norfund's investments in renewable energy in 2000–2013. The figure shows that nearly two-thirds of Norfund's investments went to countries in Latin America during this period, while 18 per cent was invested in Asia.

Four per cent of Norfund's investments in renewable energy went to the core countries in the period 2000–2013. This percentage is 2 per cent in 2007–2013.[55] The investments primarily include support for two hydropower plants, Bugoye in Uganda and Khimti in Nepal. In Uganda, Norfund and TrønderEnergi, through its subsidiary TronderPower Limited, have invested in the 13 MW Bugoye hydropower plant. Bugoye became operational in October 2009. In the period up to December 2012 the power plant accounted for 2.9 per cent of Uganda's total power supply.[56] In 2011, the power plant produced 82 GWh according to Norad. Norfund has calculated that based

54) Norad's *Norwegian Aid Statistics* database.
55) Norad's *Norwegian Aid Statistics* database. 2000–2013: NOK 188.5 million. 2007–2013: NOK 83.6 million.
56) Overseas Development Institute (2013) *Job creation impact study: Bugoye Hydropower Plant Uganda*, p. 1.

on average power consumption in Uganda, this corresponds to the power consumption of 1.7 million people.[57] The 60 MW Khimti hydropower plant in Nepal is owned by the company Himal Power LTD, in which the Norwegian companies SN Power and Bergenshalvøens Municipal Power Company (BKK) have a combined stake of almost 80 per cent. According to the Ministry of Foreign Affairs, the power plant produces at least 350 GWh annually. Norfund has not invested in power generation in four of the seven core countries: Ethiopia, Liberia, Mozambique and East Timor.

The 13 MW Bugoye hydropower plant in Uganda is one of two power plants that Norfund has invested in in the core countries. Photo: Tore Wuttudal/TrønderEnergi

As a result of a cooperation agreement with KLP on investments in renewable energy and finance, Norfund invested in several major power projects in Africa in 2013 and 2014. In South Africa, Norfund and KLP have invested in three solar park projects with a total capacity of 190 MW, and in Kenya the parties have invested in the Lake Turkana project, which will be Africa's largest wind farm. The power plant has a planned capacity of 300 MW. In Kenya, Norfund has also invested in Kinangrop Wind Park, a project with a capacity of 60 MW, expected to be completed in 2015. Norfund stated in an interview that Kenya and South Africa have stronger financial institutions than the rest of Africa, and that the operating conditions for private parties are far better than in, for example, Tanzania.

Norfund's single largest investment in renewable energy is in the company SN Power, in which the fund has invested NOK 4 billion. In 2002, SN Power was established as a joint enterprise of Norfund and Statkraft, which own 40 and 60 per cent, respectively. In 2000–2013, SN Power's investments accounted for 86 per cent of Norfund's investments in renewable energy.[58]

In an interview, Norfund pointed out that Statkraft has wanted to invest in countries with favourable conditions, while Norfund has wanted to increase investments in the

57) http://www.norad.no/no/resultater/vannkraftverk-gir-mer-ren-energi, retrieval date 24 January 2014.
58) Norad's *Norwegian Aid Statistics* database. Sorted by agreement where SN Power is the "Agreement partner" in the statistics. See also Section 5.6.

least developed countries (LDCs). Consequently, SN Power has only invested in power plants in Latin America and Asia.

Norfund's mandate is basically related to development policy, not financial goals. Nevertheless, Norfund's individual investments must be profitable for the projects to be viable in the long term.[59] In an interview, the Ministry of Foreign Affairs stated that it is not a goal per se for Norfund to turn a profit, but that the projects Norfund invests in must be profitable.

Norfund therefore operates in practice as a commercial investor that must deal with the applicable framework conditions in each country. According to Norfund, this has influenced the geographical distribution of investments in the portfolio. In an interview, Norfund stated that Latin America introduced reforms in the power sector around the same time as Norway. The countries therefore have better framework conditions for private investments than countries in Africa.

To increase investment in renewable energy in countries south of the Sahara, the subsidiary Agua Imara was founded by SN Power, Norfund, TrønderEnergi and BKK in 2009.[60] Norfund has invested NOK 176.2 million in the company, in addition to its stake through SN Power. Agua Imara has so far invested in a hydropower plant in Zambia and one in Panama and opened an office in Mozambique. Agua Imara's investments totalled NOK 229.7 million, equivalent to 9.4 per cent of Norfund's investments in renewable energy in 2009–2013.[61]

In June 2013, Norfund and Statkraft announced a restructuring of their cooperation in renewable energy that will bolster Norfund's activities vis-à-vis the poorest countries. The restructuring process involves the establishment of a new company that will distribute the investments equally between Africa, Central America and Southeast Asia. Norfund reported that it plans to sell its current SN Power portfolio over the next 10 years. Norfund's portfolio in renewable energy will therefore eventually be directed more towards Africa and LDCs.

Prerequisites for private investments in Tanzania

In an interview, the embassy in Tanzania stated that while Norwegian development cooperation has supported some private individual investments, the regulatory framework in the country places severe constraints on what is possible to implement. Opportunities for funding development projects are absent, and it is difficult to negotiate agreements with the authorities on land rights and licences. Power purchase agreements with TANESCO need a number of guarantees since the company is in very poor condition, both financially and organisationally. In focus group meetings, private investors in Tanzania pointed out that they are reluctant to invest in power projects due to TANESCO's inability to pay.

In an interview, Norfund stated that they have considered many investment projects within renewable energy in Tanzania. Among others, Norfund invested in the company Green Resources, which developed a biomass power plant with a potential capacity of up to 18 MW in connection with a sawmill. In an interview, the embassy in Tanzania related that it would also support the power plant's connection to the main grid and help local communities get power from the plant. Norfund contributed a loan of USD 1.5 million (about NOK 9 million). The project has not been realised because the supply of fuel was less than expected.

59) Interview with Norfund, 21 June 2013 and Norfund (2012) *Report on Operations,* p. 1.
60) Interview with Norfund, 21 June 2013.
61) Norad's *Norwegian Aid Statistics* database.

Norfund stated that project developers have not shown an interest in the company's offer to finance the construction of two wind farms in Tanzania. It was emphasised that the wind energy projects are good, but that the framework conditions are poor. Norfund also related that they have seen more interest in investments in small hydropower plants, but they are not confident that these will succeed.

The embassy in Tanzania has signed an agreement to support the technical and economic assessment of a hydropower plant in Masigira (118 MW), which, according to the plan, is to be developed by private or a public-private partnership. According to the Government of Tanzania's overall plan for the energy sector, the power plant is to be put into operation in 2019. According to the embassy, the project is vulnerable because the framework conditions for this type of investment are unclear. According to the Ministry of Foreign Affairs, TANESCO informed the embassy in Tanzania that development will be executed as a public-private partnership as part of the Big Results Now development initiative.

Through Norad's support schemes for businesses, Norwegian companies engaged in wind, geothermal and solar power have conducted feasibility studies of potential investments in the country. According to Norad, none of the feasibility studies have led to the establishment of business operations in Tanzania.[62]

The embassy in Tanzania pointed out that access to funding, and the authorities' ability and willingness to implement plans, are critical factors for achieving the country's ambitious energy goals. The goals are not likely to be achieved if Tanzanian authorities do not decide how to collaborate with the private sector. In an interview, the Ministry of Energy and Minerals in Tanzania stated, however, that they primarily look to donors and international financial institutions to provide financing for energy projects. In line with the Big Results Now initiative, plans call for 22 per cent of investments until 2015/2016 to be met by the private sector. This percentage is somewhat larger than the planned contribution from donor countries.

In 2012, the embassy signed an agreement with the Ministry of Energy and Minerals for funds to develop a comprehensive subsidy policy for the energy sector, in order to make it more predictable for power producers as to whether their production costs will be covered.[63] The Ministry of Foreign Affairs stated that the intent is to aim subsidies at key priorities in the energy sector, particularly increased access to energy. The proposed new subsidy policy aims to eliminate operating subsidies and introduce instead an electricity price that reflects the costs of the supplier TANESCO.

In an interview, Norfund stated that the energy authorities in Tanzania have had several less than fortunate experiences with private players in the power sector, and that this has affected the government's desire to cooperate with private actors. Tanzania is also a highly aid-dependent country, which according to Norfund, may have contributed to the expectation that if conditions are bad enough, future aid will remedy the problems.

In 2010, the Tanzanian parliament enacted a public-private partnership act.[64] Under the Act and its associated regulations, agreements on major projects can be entered

62) The projects are TAN07/100 – Pre-feasibility study – GETEK, TAN09/030 – Makambako Wind Farm, TAN12/0001 – Ruhoi – Geothermal power plant. In an e-mail, Norad wrote that two of the projects have been completed for Norad's part, while the third also has budgeted payments in 2014.

63) Source: http://www.norway.go.tz/News_and_events/agreements_and_contracts/.

64) *The Public-Private Partnership Act* (2010) and *The Public Private Partnership Regulations* (2011).

into without carrying out a prior tendering process,[65] resulting in a lack of transparency. In a focus group meeting, investors in Tanzania pointed out that national companies may consequently be excluded from participation, which may prevent the development of the Tanzanian private sector. The legislation furthermore permits international companies to enter into large contracts without public oversight. According to the investors, several major energy sector contracts have been signed in recent years without putting the projects out to tender.

Representatives of the private sector in Tanzania also stated that they have learned that the government in reality is sceptical of private investors – despite the fact that national plans usually give a different impression. The representatives believe that the national plans are often a response to what the donors need to justify their priorities, rather than a reflection of the authorities' actual goals. In an interview, the Ministry of Foreign Affairs stated that they have no choice but to accept national plans and legislation at face value when ensuring that the Norwegian priorities correspond with the priorities of the national authorities.

Access to electricity is one of several factors that determine how well the conditions in a country facilitate profitable commercial investments.

Photo: Colourbox.com

Framework conditions for private investments in developing countries

According to the plan for the Clean Energy for Development Initiative, it is difficult to trigger private investments in clean energy in developing countries because these types of investments are long-term where profits often are uncertain. Just how well a country facilitates profitable commercial investment depends on factors such as the stability of the political, economic and social conditions in the country, how effectively bureaucracy facilitates business, how the labour market is regulated, and access to the necessary capital and infrastructure, including access to electricity.

Table 1 shows how the core countries for Norwegian development assistance to clean energy rank in two of the most widely used global rankings of investment climate and competitiveness. All of the countries rank at the bottom, and are characterised by challenging conditions for commercial activities. The table also shows what private companies in the countries have specified as the biggest obstacle to investments. Lack of access to electricity is among the three biggest barriers in all core countries.

65) Under Section 3 of the Act and Section 8 of the regulations, actors may submit project proposals for individual consideration by the authorities. Under Section 36 of the regulations, these can be implemented without an open tender process.

Table 1 Investment climate in the core countries for Norwegian development assistance to clean energy

Country	Investment climate 2014 (of 189)	Competitiveness 2013 (of 148)	Survey of private companies on main obstacles to commercial activities, latest available year
Ethiopia	125	121	Access to capital, access to land, access to electricity (2011)
Liberia	144	111	Access to capital, crime, access to electricity (2009)
Mozam-bique	139	138	Access to land, access to electricity, the informal sector (2007)
Nepal	105	125	Political instability, access to electricity (2009)
Tanzania	145	120	Access to capital, access to electricity, tax rules (2013)
Uganda	132	123	Access to electricity, tax regulations, the informal sector (2006)
East Timor	172	136	Access to electricity, crime, access to capital (2009)

Sources: The World Bank (annual): *Ease of doing business*; The World Economic Forum (annual): *The Global Competitiveness Report*; The World Bank: *Enterprise Surveys*.

In an interview, Norfund pointed out that energy is a particularly difficult sector to invest in. It is characterised by high risk and the public sector is the counterparty in negotiations in most countries. In an interview, the Ministry of Foreign Affairs stated that state authorities are often unpredictable and not very stable partners. Norfund furthermore pointed out that energy is a highly politicised sector: Determination of electricity prices is politically sensitive, and many governments subsidise power supply. Some countries in Africa compete to attract investment in other sectors by providing cheap electricity. Investments in the power sector are therefore risky, because there is no guarantee that the price reflects the operating costs. Within renewable energy all capital must in addition be invested *before* production can begin. Projects are capital-intensive, and local capital markets are moreover not strong enough to finance large power investments.

Box 2 Pilot project for two private investments in Uganda

In December 2012, the Norwegian Government signed an agreement with the German development bank KfW for NOK 140 million in funding until 2017 for the GET FiT pilot project in Uganda. GET FiT will help promote private investment by, among other things, subsidising power prices achieved by small power plants in their agreements with the authorities. The project also includes a guarantee from the World Bank that will ensure the investor payments if the state fails to pay in accordance with the agreements. This helps to increase the profitability of the projects.

The first three agreements on financing power plants were signed in the autumn of 2013, and support is performance-based. In a separate memorandum, the MFA recommended increasing contributions to similar schemes as a means for attracting private investments.

Sources: http://www.bistandsaktuelt.no/nyheter-og-reportasjer/arkiv-nyheter-og-reportasjer/satser-p%C3%A5-sm%C3%A5-vannkraftverk-i-uganda. Retrieval date 24 January 2014, Ministry of Foreign Affairs (2013) *Tiltak for økte kommersielle investeringer i fornybar energi* (Measures for increased commercial investment in renewable energy), *p. 11, and GET Fit's website.*

In recent years, the Ministry of Foreign Affairs and Norad have initiated a series of reviews and studies assessing barriers to investment in the power sector in developing countries and how Norwegian development assistance can best help counteract

these.[66] According to the Ministry, some of the main obstacles are electricity tariffs that do not reflect the development costs, the risk of non-payment by power purchasers, political and regulatory risk, corruption and technical problems.[67]

4.3 Norwegian development assistance to increase access to energy

According to the International Energy Agency (IEA), energy supply must be increased both by expanding central power grids and by building local and isolated solutions to reach everyone globally by 2030. IEA calculations show that the expansion of the power grid to areas without electricity is the best solution in urban areas and for 30 per cent of rural communities. For 70 per cent of rural communities, isolated or local systems should be developed, such as isolated power grids or solar panels.[68]

According to the IEA, it is not cost-effective to build power lines to remote areas. The reason is that the remote areas often have low population density and are difficult to access. In addition, the population is poor and has a low consumption of power, often no more than 30 kWh per household per month. This makes it difficult for power companies to recoup the cost of extending extensive infrastructure to these areas.[69]

Vast numbers of people in Sub-Saharan Africa lack access to electricity in their home. To work in the evening this young man has to go out on the street and read under a street light. Photo: Christopher Herwig

66) For example: Brandtzæg, B. and S. Hansen (2005) *Barriers to investment in the power sector in developing countries*; Norconsult (2010) *A study of success factors and challenges for commercial clean energy investments in developing countries*; Norad (2010) *Leveraging Private Investments to Clean Energy Projects: A Guidance Note for Norwegian Development Assistance.*

67) Ministry of Foreign Affairs (2013) *Tiltak for økte kommersielle investeringer i fornybar energi* (Measures for increased commercial investment in renewable energy), p. 2.

68) International Energy Agency (IEA) (2011) *World Energy Outlook 2011. Energy for all. Financing access for the poor. Special early excerpt,* p. 20.

69) Energy Access Practitioner Network (2011): *Towards Achieving Universal Energy Access by 2030*, p. 5; the World Bank (2010) *Addressing the electricity access gap – Background paper for the World Bank Group Energy Sector Strategy*, p. 9.

Smaller, local systems are therefore well suited to reaching the rural population.[70] This is also supported by Norad's guidelines for planning rural electrification which emphasise that the development of electricity supply should be done by extending the main grid where possible, but that this should be considered in conjunction with the distance to the central power grid (and thus the cost of development) and the potential customer base.

4.3.1 Results of Norwegian development assistance for central and distribution grids

About NOK 2 billion of the Norwegian development assistance to clean energy went to the development of central and distribution grids in the core countries in 2000–2013. Besides Norfund's support, it also represents the largest share of total energy aid. Several of the projects are resource-intensive and therefore financed with other donors. For the embassy with responsibility for Liberia and the embassies in Mozambique and Tanzania, this kind of project represents the largest share of their project portfolio.

Table 2 lists the projects embassies in core countries have supported and the results achieved.

Table2 Project for development of central and distribution grids and results in the core countries for the period 2000–2012

Country	Amount in support	Type of project	Results
Ethiopia		None	
Liberia	Approx. NOK 370 million	Upgrading and construction of the power grid in Monrovia and surrounding areas, co-financed with USAID and the World Bank.	Has reached 14,000 new customers. Has goal of 33,000.
Mozambique	Approx. NOK 770 million	Four major electrification projects	Total of 18,200 new connections. One of the projects increased by a further 27,000 connections after completion. Support has contributed to achieving the authorities' goal of linking all the nation's district capitals to the central grid, but it has been very costly to achieve this goal.*
Nepal	Approx. NOK 80 million	Expansion of main grids. Rural electrification in connection with various power plants	The central grid project has been significantly delayed, but includes plans for 9,000 connections by 2017. Rural electrification projects have given approx. 15,000 households access to electricity.
Tanzania	Approx. NOK 470 million.	Support for the Rural Energy Agency, support for the development of power grids in Zanzibar and support for a cable from mainland Tanzania to the island of Pemba in the Zanzibar archipelago. Also support for the development of the power grid between Zambia and Tanzania.	The measures are described in Section 4.3.2.
Uganda	Approx. NOK 290 million	Support for the development of central and distribution grids that also include rural electrification.	Plan for 31,200 new connections. Has reached 1,120 households.
East Timor		None	

Source: Embassies' responses to list of questions. Support figures were obtained from Norad's *Norwegian Aid Statistics* database based on projects the embassies have listed. For Tanzania, information was obtained from the review of project documents in Tanzania

* Prop. 1 S (2011–2012) Proposition to the Storting (draft resolution) – Ministry of Foreign Affairs, p. 126.

70) International Energy Agency (IEA) (2011) *World Energy Outlook 2011. Energy for all. Financing access for the poor. Special early excerpt,* p. 20.

An evaluation conducted in 2013 of the impact of the Norwegian support for rural electrification in Mozambique estimates that 37,000 new households have been connected to the power grid.[71] This was far more than planned, and the evaluation showed that the reasons include a low connection fee and low electricity prices.

According to the evaluation, the national power company in Mozambique (*Electricidade de Moçambique*, EDM) is one of the power companies on the African continent with the greatest increase in network access for households. Just in 2011, EDM added 163,410 new customers. However, the electricity company experienced a financial loss of over 25 per cent in 2003–2013 due to reduced tariffs per kilowatt hour sold, increased production costs and relatively high costs from the expansion of the power grid. One conclusion of the evaluation was therefore that extension of the power grid, especially to rural areas, is not economically sustainable for a power company with tariffs that do not reflect costs.[72]

The audit shows that a limited amount of Norwegian development assistance went to local energy projects without connection to the central grid. In 2000–2012 about NOK 300 million was spent on local energy measures in the core countries Ethiopia, Mozambique, Nepal and Tanzania.[73] The support went to solar panels, clean cook stoves and mini-hydropower plants that supply communities. The embassy in Uganda and embassies with responsibility for Liberia and East Timor have not supported local energy measures in the audit period.

A large percentage of the support for local energy measures, NOK 233 million, went to the programme for supporting the energy sector in Nepal.[74] The programme took place in 1999–2012 with support from Denmark's Danida, the Norwegian Ministry of Foreign Affairs, the UK's DFID, Germany's KfW and the government of Nepal. Norwegian support accounted for 30 per cent of the total funding.

Through the programme, which took place in 1999–2012, 436,000 households gained access to electricity from photovoltaic systems and micro-power plants. In addition, 670,000 households gained access to more clean-burning wood stoves. In 2012, the government took over ownership of the programme, which continues to receive Norwegian support. According to the embassy in Nepal, 200,000 households gained access to electricity, more clean-burning wood stoves or biogas for cooking during the programme's first year. The initiative relies on subsidies and support from donors and according to the embassy it is a challenge to increase investments from the private sector.

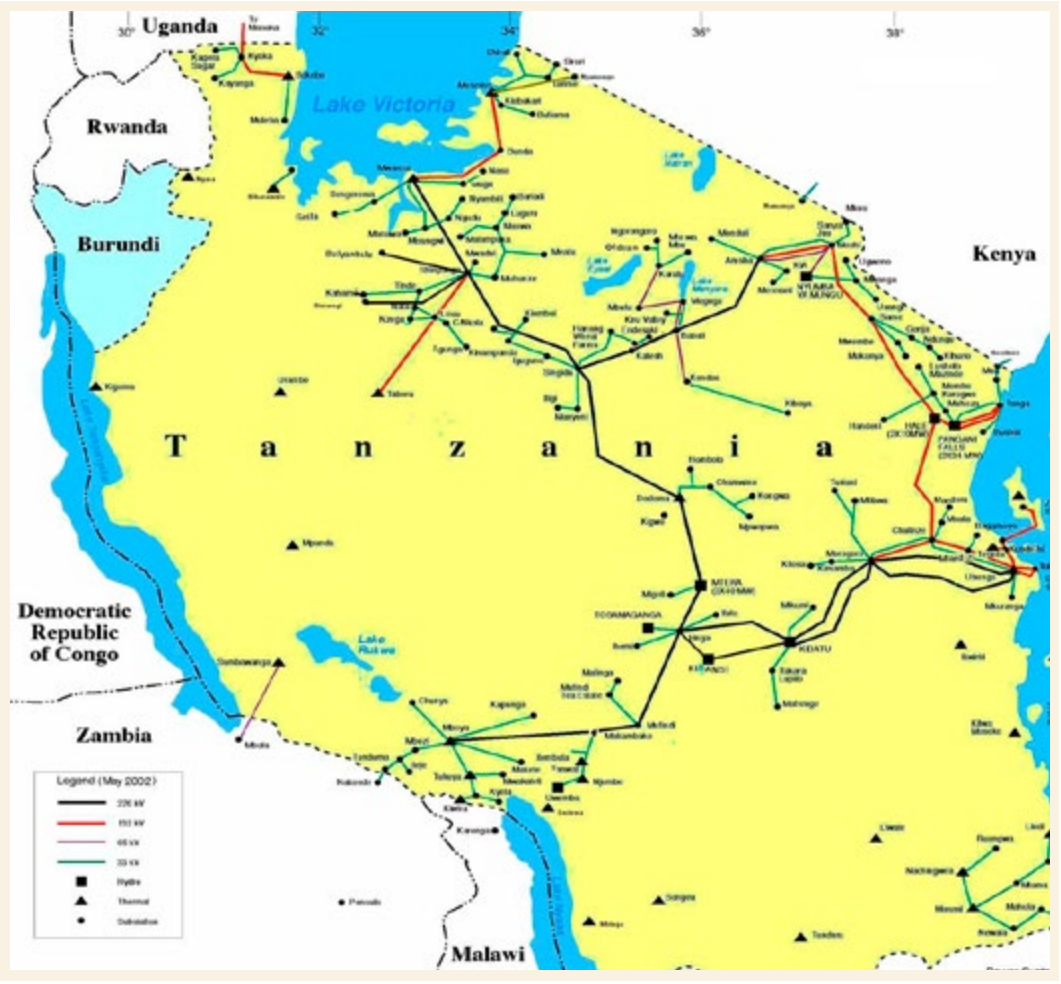
4.3.2 Norwegian measures in Tanzania

Large parts of the population in Tanzania, particularly in the western and southern regions, are not connected to the main grid. According to Tanzania's National Bureau of Statistics, 18 per cent of households were connected to the main grid in 2012. This represents an improvement from 12 per cent in 2007. The percentage of households connected to the main grid varies between cities and rural areas. In 2012, 68 per cent of households were connected in Dar es Salaam, 36 per cent in other towns and cities, and 4 per cent in rural areas.[75]

71) Norad (2013) *Impact assessment of rural electrification.*
72) Ibid.
73) Norad's *Norwegian Aid Statistics* database.
74) Energy Sector Assistance Programme (ESAP). Alternative Energy Promotion Centre (2013): *Energizing Rural Nepal*.
75) National Bureau of Statistics (2013) *Key Findings. 2011/12 Household Budget Survey*; National Bureau of Statistics (2007) *Household Budget Survey*.

A remote village in Nepal is supplied with electricity from a micro power plant built by a Norwegian-supported programme. The programme has helped over 400,000 households gain access to electricity from solar or micro power plants. Photo: Alternative Energy Promotion Centre

Figure 8 The central grid in Tanzania*



* Large parts of Tanzania are not connected to the central grid. The Norwegian MFA supports the Rural Energy Agency, which has the responsibility to provide electricity to rural Tanzania.

Source: TANESCO

During the period of 2000–2013, Norwegian development assistance to increase access to energy went to support the Rural Energy Agency, the civilian organisation TaTEDO, which works for sustainable energy, projects for rural electrification in Zanzibar, as well as a small project for development of the main grid on the border between Tanzania and Zambia.

Rural Energy Agency

In April 2013, the Ministry of Foreign Affairs entered into an agreement with the Government of Tanzania to support the Rural Energy Agency's funds with NOK 700 million.[76] This is one of Norway's largest bilateral aid agreements,[77] and the Ministry is the fund's largest external contributor.[78] The fund is the Tanzanian government's main instrument for developing the energy supply in rural areas.

The Rural Energy Agency (REA) was established in 2007 and is governed by the Ministry of Energy and Minerals. The Agency's primary responsibility is to manage the fund for energy in rural areas and to provide grants to private investors who want

76) *Agreement between the Norwegian Ministry of Foreign Affairs and the Government of the United Republic of Tanzania regarding Financial Support to the Rural Energy Fund*, 9 April 2013.
77) Source: http://www.norad.no/no/om-bistand/landsider/afrika/tanzania. Retrieval date 10 March 2014.
78) Swedish Sida, the World Bank and the European Union also support the fund.

to start energy projects in rural areas. According to the Ministry of Foreign Affairs, the purpose of the REA is to subsidise investments in the private or public sector that are socio-economically profitable and not necessarily commercially profitable. By awarding grants and subsidies, the Agency supports development of the power grid, isolated energy projects and projects for energy efficiency (such as clean-burning cook stoves). Another important task is to facilitate private investments by building the capacity and skills of potential project managers and investors in rural areas in order to qualify them for financial support from the REA.

The REA supported 136 projects in the period between February 2008 and June 2013. Table 3 shows the types of projects that have received support from the REA since the fund was established.

Table 3 Type of projects that have received support from Tanzania's Rural Energy Agency

Type of project	No. of projects	Percentage of total funds allocated (%)
Extension of the power grid (TANESCO)	90	88,59
Diesel generator (TANESCO)	5	9,13
Solar power projects	16	1,16
Compensation to landowners – activities	5	0,53
Bioenergy projects	10	0,33
Wind power projects	6	0,18
Hydropower projects	2	0,05
Feasibility analyses	2	0,04
Total	136	100

Source: Norad (2014) *Performance Audit of Rural Energy Agency, Tanzania*

Table 3 shows that 90 of the projects concerned the extension of the power grid operated by TANESCO, and over 97 per cent of the funds went to TANESCO projects. Twenty-four of the projects included solar, wind or hydropower. These projects received less than 1.5 per cent of the funds.

Planning of cooperation with the REA

According to Norad's pre-assessment of Norwegian support to the REA, it will not be economically viable to provide support to TANESCO for development of the power grid. The tariffs that new customers pay do not cover production costs and thereby further weaken TANESCO's finances. TANESCO's low production level also represents a risk that customers will not receive a stable supply of power, especially during periods of drought.[79] According to the embassy in Tanzania, the performance and sustainability of the REA's projects depend on an improvement in TANESCO's finances. Both the Swedish International Development Cooperation Agency (Sida) and the Energy and Water Utilities Regulatory Authority in Tanzania pointed out in interviews that it is problematic that almost all REA funds go to projects being carried out by TANESCO because there are fundamental questions about the company's financial sustainability. Norad's pre-assessment also considered TANESCO's weak finances and the risk that the infrastructure will not be maintained.

Norad has also assessed the REA's system for prioritising and selecting projects as being weak. It is therefore considered a risk that the funded projects are being selected

79) *Decision document*, 29 March 2013; Norad (2014) *Performance Audit of Rural Energy Agency, Tanzania,* Annex A.

on the basis of political considerations rather than a technical and economic assessment. The REA's systems for monitoring and control are also considered to be weak.[80]

The embassy in Tanzania related that it initially wanted to give the REA non-earmarked support because the embassy believed there were grounds to show the REA that it had faith in the REA's ability to manage the funds freely. Due to the weaknesses identified in the pre-assessment, the Ministry of Foreign Affairs decided instead to enter into an agreement of NOK 700 million payable in two phases.

During the first agreement period, the embassy will grant NOK 300 million for specific projects and technical assistance for fiscal years 2013/14 and 2014/15. Among other things, the REA will remedy several of the shortcomings that were identified in the pre-assessment. The embassy related in an interview that support for the second phase will not be earmarked if the improvements are satisfactory. The embassy also stated that it has entered into a framework agreement with an energy consultant who will follow up the agreement.

The REA's use of internal policies and standards
The agreement between the Ministry of Foreign Affairs and the Government of Tanzania contains a plan for project management and monitoring.[81] The plan refers to the REA's operations manual with internal requirements, guidelines, standards and statutes for managing and allocating funds and following up projects. According to the pre-assessment, the use of the operations manual will increase the likelihood that the REA will give priority to projects run by actors other than TANESCO.[82]

To follow-up the demands raised in the first phase of the agreement, Norad funded a review of the REA's management practices in the autumn of 2013.[83] The review shows that the REA has several sets of guidelines and standards, and it is unclear whether the operations manual has been approved within the REA. The review shows that the REA does not follow the guidelines and standards when approving projects operated by TANESCO. The operations manual is used in varying degrees when the REA considers projects that are not subject to TANESCO. The audit shows that the REA's failure to follow adopted guidelines and standards weakens the Ministry of Foreign Affairs' ability to ensure that the REA's priorities are in line with Norwegian development assistance. The Ministry related that the performance audit confirms findings from Norad's pre-assessment and that some work remains before the Norwegian support can be without earmarking. Furthermore, the Ministry stated that the REA endorses all the recommendations and is in the process of improving its quality assurance procedures.

The REA stated in an interview that funding is the only obstacle to the Agency reaching its vision of achieving 60 per cent access to energy in Tanzania by 2018. In connection with the agreement with the Ministry of Foreign Affairs, a survey was conducted of how power can be extended to villages in Tanzania at the lowest possible cost.[84] The survey is supported by Norad and will according to the Ministry be completed in the summer of 2014. However, the REA pointed out in an interview that the result of the survey is primarily a tool for dialogue with donors, since most donors require the existence of a plan before providing support. The Ministry stressed that the survey is a plan for development projects that clarifies the order and type of

80) *Proposal document for submission to Norwegian government*, March 2013, p. 22.
81) *Agreement between the Norwegian Ministry of Foreign Affairs and the Government of the United Republic of Tanzania regarding Financial Support to the Rural Energy Fund.* 9 April 2013; Norad (2014) *Performance Audit of Rural Energy Agency, Tanzania* Annex E, p. IV.
82) *Decision document*, 29 March 2013; Norad (2014) *Performance Audit of Rural Energy Agency, Tanzania* Annex A.
83) Norad (2014) *Performance Audit of Rural Energy Agency, Tanzania.*
84) Rural Energy Agency/Norad (2012) *National Electrification Programme Prospectus. GIS Analysis of least cost access plan.*

projects. A key criterion for the plan is cost-effectiveness. The survey is intended to serve as a common framework for all donors in the sector.

The REA's priorities
The REA stated in an interview that their mandate is to promote the economic and social effects of electrification. This means that a project may be prioritised even if it is not financially sustainable, if the socio-economic impact of the project is expected to be in line with government targets.

The review of the REA's management practices shows that the REA does not follow its own criteria for prioritisation and selection of projects – except for projects designated by the Government of Tanzania. In the report from the performance audit, it was pointed out that it was not possible to identify how the REA prioritises among the projects designated by the Government of Tanzania.

In an interview, the Norwegian Embassy in Tanzania stated that the REA gives high priority to grid expansion because it is the cheapest way to reach Tanzania's ambitious energy access targets. At the same time, large areas of Tanzania will not be covered by the main grid for a long time. According to the embassy, isolated systems and renewable technologies will be competitive in these areas, and in many cases, will be the only energy supply option. Weak framework conditions and few private actors in the market mean that few such projects will be started.

One of the goals of the REA was precisely to increase the knowledge and skills of potential investors in rural areas to engage in local energy projects. The review of the REA's management practices concluded that the REA does not seem to have the ability to prioritise the facilitation of private investments in rural areas. According to the Ministry of Foreign Affairs, a total of 227 potential project developers received training in biogas, solar and hydropower during the second half of 2013. In interviews, representatives of civil society stated that the REA and the Tanzanian authorities generally do not pay as much attention to local initiatives that can contribute to the development of power in rural areas. The Ministry related that the REA will follow up the recommendations from the performance audit on more active monitoring of private investors.

According to the REA, many donors only want to prioritise isolated solutions, despite the fact that grid expansion is the cheapest solution. According to the REA's analyses, grid expansion is the best solution for 5,526 of Tanzania's remaining villages without access to electricity, while local, isolated power plants are the best solution for just 153 villages.[85] The development assessment is based on population size, distance to existing power grids and the potential for development of infrastructure, health and education institutions, banking and markets. The survey has identified a further 732 settlements in remote areas where isolated solutions are developed on a smaller scale.

In an interview, the REA stated that the development of the main power grid to increase supply in rural areas will continue to be a priority, because the isolated systems cannot supply enough power to stimulate commercial activity that contributes to economic growth. Meanwhile, the REA wants to support multiple isolated systems, but these will be an interim solution until the main grid covers the whole country. The Regulatory Authority in Tanzania, EWURA, pointed out in an interview that the demand in rural areas is not high enough to cover the costs of grid development. The REA acknowledged in an interview that energy demand is low in these areas.

85) Rural Energy Agency/Norad (2012) *National Electrification Programme Prospectus. GIS Analysis of least cost access plan.*

Rural Electrification in Zanzibar

In 2000–2013, the embassy in Tanzania supported two major development projects in the archipelago of Zanzibar: rural electrification on the islands of Unguja and Pemba and construction of a subsea power cable from Tanga on the mainland to the island of Pemba. Zanzibar's power company (ZECO) is responsible for implementing the projects.

The Ministry of Foreign Affairs has funded rural electrification in Zanzibar in several phases since the 1980s. Support in 2000–2012 totalled NOK 102.8 million. The Norwegian-funded projects have provided over a hundred villages with access to electricity.

Norwegian support has contributed to the extension of the power grid to 80 per cent of Zanzibar's population. About 25 per cent of the inhabitants of Zanzibar, of whom 7 per cent live in rural areas and 57 per cent in urban areas, are connected to the power grid so that they have power in their own homes.[86] According to the Ministry of Foreign Affairs, ZECO has connected increasing numbers of households to the grid in the period after the projects were completed. Based on the 2012 census, the embassy in Tanzania estimated that the proportion of households connected to the grid in Zanzibar is 45 per cent, with 53 per cent on Unguja and 24 per cent on Pemba.

Power lines in Stone Town on Zanzibar. Photo: Office of the Auditor General

The aim of the Norwegian-funded rural electrification projects was for 20 per cent of the population, in villages that received access to electricity, to connect to the power grid during the project period. According to Norad's final evaluations of the projects, the 20-per cent target was far from achieved. Evaluations of previous projects showed that the connection rate has been about 10 per cent. Because fewer homes were connected to the grid than was the goal, the final evaluation concluded that the development impact of the projects was less than anticipated.[87]

86) Norad (2010) *End review of Tanga-Pemba subsea cable*, p. 16, Norad (2009) *End-review of Phase IV and Extension of the Zanzibar Rural Electrification Project*, p. 9.
87) Norad (2009) *End-review of Phase IV and Extension of the Zanzibar Rural Electrification Project*, pp. 15 and 40.

One main reason for the low connection percentage is that it is too expensive for individual households to connect to the power grid. The cost of actual power consumption comes in addition. According to the final evaluations, preferential loans that can finance connection fees for low-income residents were only available in some of the electrified villages. It is therefore primarily the wealthiest households in villages that benefit from access to electricity in their own homes. Fans, radios and televisions are the most common purchases following connection to power supply, while very few people buy electric stoves. Food is still prepared with wood and charcoal.[88]

The evaluations show that the projects have had a positive effect on citizens in terms of improved welfare services, especially in health and education. Access to electricity has also had a positive effect on sole proprietorships. Increased access to electricity has improved the productivity and turnover of sawmills and enterprises that produce furniture. The evaluations show that access to electricity has had positive effects on tourism on the island of Unguja, where several hotels have been established in areas surrounding the electrified villages. At the same time, the hotels have not employed locals to any great extent.[89] The evaluations do not show that other new businesses have been established as a result of the access to electricity.

The expansion of the grid was completed in accordance with the schedule and, thanks to budget savings, it was possible to electrify more villages than planned.[90] However, the final evaluation points out weaknesses in the sustainability of the projects, because ZECO is not able to maintain the infrastructure. Furthermore, it points out that the infrastructure built with Norwegian support in the 80s and 90s, is starting to rot.[91] The Norwegian-supported projects were implemented by a project unit with a Norwegian project manager, who worked independently of ZECO's daily operations. According to the final evaluation, the objective of capacity building in ZECO was set aside as a result.

Box 3 Corruption charges against Zanzibar's power company (ZECO)

In January 2013, the Control Committee in Zanzibar's parliament submitted a report that revealed widespread corruption in ZECO. Among other things, it was revealed that while many electricity customers paid exorbitant amounts to connect to the power grid, most of this money never reached the company. At a parliamentary hearing, the opposition stated that donors must be made aware that their money is being misused. While the charges do not directly apply to the use of Norwegian aid funds, they do involve the fees ZECO collects for new connections to the grid. The audit of the Norwegian project support in Zanzibar had no serious remarks.

Source: http://allafrica.com/stories/201310230215.html, Ministry of Foreign Affairs

In an interview, the embassy in Tanzania stated that it is aware of the shortcomings of the projects. The embassy noted that this is the rationale for the commencement of a new joint project on capacity building in ZECO. The start-up phase of the project has been challenging because of the basic lack of expertise and capacity in ZECO. The auditing firm PWC has been engaged by the embassy to recommend control measures for the use of Norwegian aid funds in the project.

88) Ibid, p. 11, 33, 36, 41; Norad (2006) *End Review of Phase IV Electrification Programme Zanzibar*, p. 16; Winther, T. (2006) *Social Impact Evaluation Study of the Rural Electrification Project in Zanzibar, phase IV (2003–2006)*, p. 25. See also Section 4.4.2.

89) Norad (2010) *End review of Tanga-Pemba subsea cable*, p. 32; Norad (2009) *End-review of Phase IV and Extension of the Zanzibar Rural Electrification Project*, pp. 33–34; Winther, T. (2006) *Social Impact Evaluation Study of the Rural Electrification Project in Zanzibar, phase IV (2003–2006)*, p. 25.

90) Norad (2009) *End-review of Phase IV and Extension of the Zanzibar Rural Electrification Project*, p. 15.

91) Norad (2009) *End-review of Phase IV and Extension of the Zanzibar Rural Electrification Project*, pp. 9 and 15.

An evaluation of the effect of the Norwegian support shows that the completion of the subsea power cable to the island of Pemba in the Zanzibar Archipelago, has led to a more stable supply of power on the island. The Norwegian contribution to the cable was NOK 300 million, while the Tanzanian government funded NOK 100 million. The evaluation shows that the cable can be expected to meet the demand for electricity on Pemba for the next 20 years.[92]

4.3.3 Results of power development for poor households

Household surveys from Africa show that those who are not connected to the power grid mainly belong to the poorest segment of the population, and that these groups have great difficulty paying for connection to the power grid. Connection usually costs between NOK 300 and 1,500 in Sub-Saharan Africa, an unattainable sum for many poor people who live on less than NOK 15 a day. This means that even if the power grid is rolled out to a village, large parts of the population will remain without access to electricity in their own homes. The relevant literature therefore points out that schemes that can subsidise or otherwise finance the connection for the poor are necessary. Many countries have subsidy systems that primarily benefit households that already have access to power.[93]

This is confirmed by data from the National Household Survey conducted by Tanzania's National Bureau of Statistics in 2007. Statistics show that by far the highest proportion of poor people in Tanzania live in rural areas, and donors and authorities in Tanzania have given priority to extending the power supply to these areas as a means of reaching the poor. However, the 2007 survey shows that the households with the highest incomes are connected to the power grid in rural areas.

Table 4 Percentage of households connected to the power grid by income group in Tanzania

Income group		1 (low)		2		3 (high)		All	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Cities	Has electricity	86 937	18,5 %	212 560	29,9 %	520 346	48,4 %	819 843	36,3 %
	Does not have electricity	383 434	81,5 %	498 182	70,1 %	555 642	51,6 %	1 437 258	63,7 %
	All	470 371	17,6 %	710 742	26,6 %	1 075 988	40,3 %	2 257 101	28,2 %
Rural areas	Has electricity	2 959	0,1 %	37 652	1,9 %	101 973	6,4 %	142 584	2,5 %
	Does not have electricity	2 197 660	99,9 %	1 920 583	98,1 %	1 493 251	93,6 %	5 611 494	97,5 %
	All	2 200 619	82,4 %	1 958 235	73,4 %	1 595 224	59,7 %	5 754 078	71,8 %
All	Has electricity	89 896	3,4 %	250 212	9,4 %	622 319	23,3 %	962 427	12,0 %
	Does not have electricity	2 581 094	96,6 %	2 418 765	90,6 %	2 048 893	76,7 %	7 048 752	88,0 %
	All	2 670 990	100,0 %	2 668 977	100,0 %	2 671 212	100,0 %	8 011 179	100,0 %

Source: Tanzania's National Bureau of Statistics, HBS 2007

92) A baseline study was conducted on Pemba in 2009. It will make it possible to assess the impact of the Norwegian-funded subsea power cable. The study will be followed up in 2014.

93) Norad (2006) *State of the art study: The long-term effects of assistance to the power sector*, p. 63; Bernard (2012) *Impact analysis of Rural Electrification Projects in Sub-Saharan Africa*, in The World Bank Observer, vol. 27, no. 1 2012, p. 38; the World Bank (2010) *Addressing the electricity access gap – Background paper for the World Bank Group Energy Sector Strategy*, pp. 9 and 15.

Table 4 shows that in 2007, 85 per cent of those with access to electricity lived in cities. In rural areas, 0.1 per cent of the poorest households had electricity compared with 6.4 per cent of the wealthiest. In the cities, the corresponding distribution was 18.5 per cent and 48.4 per cent.

A Norad evaluation from 2007 that dealt with Norwegian development assistance to the power sector in Mozambique and Nepal concluded that the projects had widely varying effects on the poor. Projects that had a clear focus on poverty were also considered to have a far greater impact on the living conditions of the poor. Furthermore, the evaluation found that the poorest were largely unable to benefit from the potential development impact of access to electricity, such as greater opportunities to engage in business activities.[94]

Another Norad evaluation from 2006 dealing with support to the electricity sector pointed out that support for rural electrification projects often rests on unsubstantiated or unproven hypotheses about their effects on health, education and poverty reduction, and argued that such effects are largely overestimated.[95] According to Norad, a 2008 review conducted by the World Bank of its portfolio of rural electrification projects concluded that the projects lacked supplemental measures to ensure poverty reduction and positive social effects.[96] In an interview, the embassy in Tanzania emphasised that it is essential to ensure interaction with public services and other infrastructure measures to ensure that increased access to energy contributes to development. However, the embassy stated that this is the responsibility of the national authorities and that the embassy does not strive for such synergies in specific projects.[97]

House in Mozambique that is connected to the local power grid and has its own solar panel.

Photo: Koen Peters

94) Norad (2007) *Evaluation of Norwegian Power-related Assistance*, pp. 34–35.
95) Norad (2006) *State of the art study: The long-term effects of assistance to the power sector.*
96) Norad (2009) *Norwegian Development Assistance to Rural electrification – Best Practice Guide for Planning*, pp. 3–8.
97) Interview with the embassy in Tanzania, 26 September 2013.

Household use of electricity for cooking

A key objective of increasing access to energy for households is to reduce the use of firewood, charcoal and coal for cooking. This will, among other things, lead to less local air pollution and significant health gains in terms of fewer deaths from lung cancer and other lung diseases.[98] International reviews, evaluations of Norwegian aid and the experience of other donors indicate that access to electricity leads to major changes in the use of lights, TV, radio, mobile phone chargers and the like. However, virtually no one uses electricity for cooking.[99]

An analysis done on the basis of data from the 2007 National Household Survey in Tanzania shows that by far the most used energy sources for cooking are firewood and charcoal, which together account for 96 per cent of consumption. 0.5 per cent of households use electricity for cooking. Among the richest fifth of the population, only 1.7 per cent use electricity for cooking.

Inside the house, power is used to charge electronic devices such as mobile phones, radio and TV. audit shows that very few households use electricity for cooking. Photo: Koen Peters

The effects of energy development on economic development and employment

Lack of access to electricity, together with lack of access to capital, is considered the biggest obstacle to conducting business in Sub-Saharan Africa. Forty-six per cent of the companies in the region reported that lack of access to electricity is a significant problem.[100] Increased access to power can therefore facilitate increased business activity and economic growth, which could also benefit the poor in these areas.

98) WHO/UNDP (2009) *The energy access situation in developing countries: A review focusing on the least developed countries and Sub-Saharan Africa*, p. 27.

99) Norad (2013) *Impact assessment of rural electrification*, p. IV; Bernard (2012) *Impact analysis of Rural Electrification Projects in Sub-Saharan Africa*, in The World Bank Observer, vol. 27, no. 1 2012, p. 40; Interview with Sida 24 September 2013; Norad (2009) *End-review of Phase IV and Extension of the Zanzibar Rural Electrification Project*, pp. 33, 36; Winther, T. (2006) *Social Impact Evaluation Study of the Rural Electrification Project in Zanzibar, phase IV (2003–2006)*, p. 14.

100) Enterprise surveys, biggest obstacle. http://www.enterprisesurveys.org/CustomQuery.

However, according to the United Nations Development Programme (UNDP), increased access to electricity alone is not enough to achieve economic growth and employment. In the short term, access to energy will not lead to new jobs unless a number of other factors, such as access to capital and technology, are in place.[101] An analysis of the impact of rural electrification projects in Africa concluded that the expansion of electricity access scarcely leads to more productive activities that contribute to economic growth.[102]

A Norad evaluation from 2007 dealing with Norwegian aid to the power sector in Mozambique and Nepal concluded that access to electricity facilitated growth in agricultural activities in Mozambique. In Nepal, however, it did not have any discernible impact on the industry.[103]

According to the 2013 Norad evaluation of Norwegian support for rural electrification in Mozambique, local leaders in the villages reported that access to electricity has a significant social impact in terms of better safety health, education and social services. The evaluation also showed that already established businesses increased their productivity and financial profit as a result of better access to electricity. However, the evaluation showed that the increased power supply contributed little to new production activity. The established companies did not hire more people, nor were new businesses established. According to the evaluation, there is no basis for saying that electrification has provided better opportunities for employment growth in the short or medium term. The evaluation showed that a lack of training and provision of small loans means that potential investors do not have enough expertise or means to see the opportunities provided by the increased energy supply.[104] Representatives of civil society in Tanzania related at focus group meetings that the lack of access to small loans and expertise is a widespread problem in rural Tanzania.

In 2013, the British Overseas Development Institute (ODI) carried out an evaluation of the employment effects of the Bugoye hydroelectric plant in Uganda, which is owned by Norfund and Trønder-Energi. The evaluation states that the business community in the district surrounding the plant has benefited the most from the power. Approximately 1,300 jobs were created in connection with the construction and operation of the power plant. It was not stated how many of the employees were local workers. Furthermore, a theoretical effect of up to 10,000 more jobs was estimated as a result of increased and more stable power supply in the area. According to the evaluation, the estimate is uncertain due to significant weaknesses in the data. Among other things, there is no evidence of fewer power outages after the power plant was put into operation, and the plant has not led to an increase in the number of connections to the grid.

4.4 Norwegian aid for capacity building

In various documents, the Ministry of Foreign Affairs and Norad highlights that capacity building and institutional cooperation have been a key part of Norwegian aid since the 1950s and 60s, and that they are among the most important instruments in bilateral development assistance to clean energy. Strengthening a country's institutional capacity to manage resources that can provide the basis for income generation is key to its development. Institutional cooperation often consists of skills-enhancing

101) UNDP (2012) *Integrating Energy Access and Employment Creation to Accelerate Progress on the MDGs in Sub Saharan Africa, executive summary,* p. 3.
102) Bernard (2012) *Impact analysis of Rural Electrification Projects in Sub-Saharan Africa*, in The World Bank Observer, vol. 27, no. 1 2012, p. 40.
103) Norad (2007) *Evaluation of Norwegian Power-related Assistance*, p. 36.
104) Norad (2013) *Impact assessment of rural electrification*, p. V.

measures and development of institutional frameworks, policies and regulations in the energy sector.

Embassies in the seven core countries for clean energy signed 27 contracts relating to capacity building in 2000–2013. Capacity-building takes place in different types of institutions, e.g. ministries, power companies and regulatory authorities.[105] The projects run over two to twelve years, and many of them involve relatively small figures. NVE and Statnett are generally used as the Norwegian partner. In its response to the list of questions, the embassy in Nepal stated that many of the projects have been costly to administer in terms of resources.

4.4.1 Institutional cooperation between Statnett and TANESCO in Tanzania

In 2010, Statnett entered into institutional cooperation with the Tanzanian power company TANESCO. Statnett has had an institutional cooperation with the state company responsible for operating the central grid in Uganda since 2006, and in 2007 TANESCO contacted Statnett concerning their desire for a similar cooperation.

The project was divided into two phases of three and two years, respectively. Initiation of phase two was dependent on a positive mid-term evaluation. Phase two began in January 2013, following the recommendation of the midterm evaluation, and includes the same goals and work areas as phase one. Until 2013, in excess of NOK 18 million was disbursed to the project.

The aim of the project is to strengthen TANESCO's operation of the central grid, as the sole purchaser of power, and to make the company more efficient. The partnership covers four areas and is organised into the following working groups:

a) Organisational development and corporate strategy (management of TANESCO)

b) Strengthened capacity for development of central grids (investment department)

c) Operation and maintenance of central grids (transmission department (main grid))

d) Development of IT systems (business services department)

The working groups have made little headway and show limited results. Many of the working groups lack resources and find that TANESCO does not adequately prioritise project activities.

A review of the quarterly progress reports, annual reports and mid-term evaluation of the project shows that the progress of working group A has been the best in activities related to personnel development. It has been difficult for the management of TANESCO to prioritise project activities, and internal changes have meant that activities have had to be cancelled or changed. Two of the planned activities were cancelled because they were no longer wanted by TANESCO. A hired consultant and the Energy and Water Utilities Regulatory Authority were already doing the same job. The problems faced by the working group have continued into phase two of the project, despite the fact that the level of ambition was reduced before its start-up in 2013. Yet another activity has been shut down due to lack of progress and prioritisation by TANESCO. As of the second quarter of 2013, the other activities were delayed due to a lack of management decisions by TANESCO.

105) See Annex 2 for a list of capacity building-related projects in core countries for the Clean Energy for Development Initiative.

The review of key project documents shows that working group B also made some progress at the start of the project, but TANESCO lacked personnel who could prioritise participation in the activities. The situation has since improved, which has helped progress. During the period, employees have, among other things, learned to do investment analyses, but it was highlighted in the annual report for 2012 that these have not been used by TANESCO in their decision-making processes. Activity levels were high at the start of Phase 2 of the project, and a variety of training activities were conducted. The group has had major budget overruns.

The review of the project documents furthermore shows that working group C saw good participation and progress in many of the planned activities. The results are, however, still limited because many purchased systems and programmes have not been put into operation due to a lack of decisions and resources in TANESCO. The systems were not purchased as part of the partnership project, but training in and use of the systems was part of the planned activities in the project. The working group also carried out basic studies of maintenance costs from 2010, 2011 and 2012.

The review of project documents also shows that working group D has implemented activities to improve data security in TANESCO. A software purchase was funded by the World Bank, but was unknown to Statnett during the planning of the project. This meant that training in how to use this software was subsequently included in the project. The working group, however, lacked computers to conduct the training. To solve the problem, Statnett donated 600 obsolete laptops to TANESCO. The group experienced major delays at the start of Phase 2. In an interview, the project management of TANESCO stated that the project has progressed somewhat slowly. This is partly because computer problems have caused some communication problems between Statnett and TANESCO.

The mid-term evaluation of institutional cooperation reveals that the overall project exceeded the budget for the period from 2010 to Q2 2012. TANESCO accounted for the bulk of the overruns. Ninety per cent of TANESCO's expenses consisted of travel expenses, and 10 per cent was spent on renting conference venues. The board's trips to Norway in 2011 and 2012 were TANESCO's biggest expense for the period and represented 24 per cent of the budget.

The Ministry of Foreign Affairs related that both companies follow government guidelines for air travel and allowances in Tanzania and Norway, respectively. The Norwegian Government's Travel Allowance Scale allows business class on intercontinental flights. The mid-term evaluation questions the cost of the flights, as both senior-level employees in TANESCO and all Statnett employees regardless of level travel business class. The evaluation team noted that there is agreement on the terms of the agreement with the embassy in Tanzania, but questioned how travelling business class can be accepted.

TANESCO employees undertook 121 trips in 2010–2012. According to the mid-term evaluation, it would have been more cost-effective to send Statnett employees to Tanzania, although trips to Norway have been a motivating factor for TANESCO's working groups. According to the mid-term evaluation, some trips to Norway were necessary. Other trips seem to have been less necessary. It was therefore recommended that both parties in the institutional cooperation more actively monitor and assess the need for participation and travel, in order to improve the cost-effectiveness of the project.

In a letter, the Ministry of Foreign Affairs pointed out that it is important to consider the need for travel and that exchange visits are of great importance, in part to build reciprocal relationships. According to the ministry, the recommendation in the mid-term evaluation to more actively consider the need for participation and travel has been followed up in Phase 2 of the institutional cooperation.

The mid-term evaluation also states that TANESCO's internal cost control and accounting is weak. One main conclusion was that the embassy in Tanzania and TANESCO should discuss TANESCO's budget procedures, since the overruns were significant. The mid-term evaluation also recommended auditing the financial statements for 2010 and 2012. In September 2013, the embassy in Tanzania related in an interview that an external audit of the project funds in TANESCO shall be conducted each year, but had yet to be done. The embassy pointed out that if the audit is not carried out, this will constitute a breach of contract that will cause the embassy to stop payments.

In a letter, the Ministry stated that the audit of the project accounts was delayed, but that the embassy had received the draft report from the National Audit Office of Tanzania. However, the letter does not state whether the National Audit Office of Tanzania has specifically audited the funds related to the agreement between Statnett and TANESCO. Furthermore, the Ministry stated that TANESCO does not administer Norwegian funds and that a relatively small percentage of the budget reimburses expenses incurred by TANESCO.

4.4.2 Planning

International and Norwegian policies,[106] and experiences from Norwegian institutional cooperation,[107] point to some key preconditions for ensuring the success of capacity building projects. These include thorough needs analyses in the planning, ownership and expertise in the recipient institution and a good-quality system for measuring performance.

Analysis of the needs of the recipient institution

According to the World Bank's *Capacity Development Results Framework,* an analysis of the recipient institution's needs and special characteristics should form the basis for the design of capacity-building projects and help establish baselines. According to the World Bank, such an analysis will identify the activities that are best suited to facilitating change in the organisation.

According to the Ministry of Foreign Affairs' grant administration rules, the Ministry shall assure the quality of the cooperation partner's programme document with emphasis on relevance, feasibility, risk factors and sustainability. The assessment should include all the information that is important for making a final decision on support.

The audit shows that the recipient organisation's organisational and political challenges, available capacity and expertise are not reflected in the design of the institutional cooperation between Statnett and TANESCO. As a result of the challenges, the project has made poor progress and produced few results in several cooperation areas.

106) World Bank Institute (2009) *Capacity Development Results Framework*, Norad (2001) *Guidelines for institutional cooperation* and Norad (2005) *Development Cooperation Manual*.

107) The embassies' responses to the list of questions (December 2013), NVE (2012) *Erfaringer med institusjonssamarbeid og forslag til tiltak* (Experience with institutional cooperation and proposals for actions, previous evaluations) (Norad (2006), Norad (2007), Kruse (2007)), minutes of energy adviser meetings in 2009–2014.

The collaboration was planned for two years preceded by a preparation phase in 2008. The preparation phase resulted in a draft project document, which largely outlines the same main areas of cooperation and goals as in Statnett's cooperation with the state transmission company in Uganda. The project document refers to TANESCO's business plan as the basis for the cooperation areas. However, the objectives of the business plan are very general. The project document contains no detailed account of the assessments that form the basis for the selection of the areas of cooperation.

In their assessment of the project document, Norad pointed out that it was unclear how the parties had arrived at the specific areas of cooperation, and that there was a risk that the solution in Uganda would not be relevant in Tanzania. While Norad called for an assessment of the situation in TANESCO and the company's ability to enter into collaboration, it still recommended initiating the cooperation in 2010. The parties were to obtain more basic information during the initial phase. During the initial phase, some parts of the project were adjusted, but the design was largely continued as previously planned.

In an interview, Statnett stated that the start of the collaboration was challenging. TANESCO lacked a structured approach to the question of which areas of cooperation should be prioritised, and it was difficult to obtain baseline data. This made it difficult to identify the real needs early in the planning process. TANESCO confirmed in an interview that an analysis of the company's overall needs had not been conducted. The Ministry of Foreign Affairs stated that during the preparatory phase Statnett surveyed TANESCO's needs, and that this was viewed in the context of where Statnett could help. The Ministry emphasised that the project is thus a compromise which does not cover all the problem areas in TANESCO.

An independent US agency for development aid, the Millennium Challenge Corporation, stated in an interview that there is great frustration among donors that TANESCO does not initiate action themselves. This makes it difficult for donors to know what the company's priorities are. The agency finds that TANESCO wants assistance for everything.

Statnett was chosen as a partner in the project without a prior bidding process. The embassy in Tanzania pointed out in the decision document that the project falls outside the competition principle because transmission is a natural monopoly where Statnett is the only Norwegian company with responsibilities similar to TANESCO.

During the planning process, Norad pointed out that the areas of cooperation must take Statnett's specific expertise into account, and questioned whether the project document should focus more on the operation of the main grid and less on challenges in TANESCO as a whole. Two of the four areas of cooperation in the project deal with transmission, and quarterly and annual reports show that the two transmission working groups have made the most progress. These groups are also closest to Statnett's core competencies. In a letter, the Ministry of Foreign Affairs emphasised that institutional cooperation envisages that the Norwegian partner supplements its own expertise with external consultants as needed. This has occurred in three cases in the cooperation between Statnett and TANESCO.

Many of the embassies in the core countries have learned that it is important to have good knowledge of the recipient institution so that cooperation can be adapted to the challenges of the institution. The embassy with responsibility for Liberia related that it is important to have a good overview of how the institution looks at the commencement of the project. It is also important to have knowledge about the roles of the

persons who will receive training, and a good understanding of how the institution wishes to develop. According to the embassy in Uganda, the partnership must be adapted, or tailored, to the challenges of the recipient. The embassy in Nepal provided several examples of projects where the embassy should have done a more thorough assessment of the feasibility during the planning process.

Norwegian aid authorities have considered that it is necessary to analyse the recipient institution's requirements carefully before entering into an agreement. According to the minutes of the regional energy adviser meeting in December 2012, there are mixed experiences with institutional cooperation in the energy sector, and there is a need for increased use of context and needs analyses in the planning phase. In an interview, the embassy in Tanzania pointed out that capacity development projects are to be developed in dialogue with the recipient institution, preferably through a preparation phase so that the Norwegian institution obtains a good understanding of the context of the project. In an interview, the Ministry of Foreign Affairs stated that Norad has initiated a process that will facilitate good context analyses in planning institutional cooperation.

Already in 1998, a Ministry of Foreign Affairs evaluation report prepared by the Chr. Michelsen Institute pointed out that in planning projects, more emphasis should be placed on assessing the competence and capacity of the involved institutions. Strengths and weaknesses of the institutions must be used to identify the most relevant areas of cooperation. In addition, it is necessary to make a thorough assessment of the context and the key players to ensure that institutional cooperation is relevant.[108] A 2007 Norad evaluation that included 16 institutional cooperation initiatives through Norwegian government agencies notes that the capacity of the recipient institution had not been considered in advance of collaboration. This applies to the majority of the programmes that were investigated. According to the evaluation, there should be a far more selective and critical selection of partners in the South, where it must be considered whether international technical cooperation is what the institution requires.[109] In 2012, NVE prepared a memorandum on its experiences with institutional cooperation in a number of countries. Lessons learned include the importance of a thorough analysis of the recipient's challenges, skills, capacity, mandate and ownership of the project.

The 2007 Norad evaluation indicated that there should be an independent assessment of whether the Norwegian partner institutions have sufficient technical expertise and capacity to enter into institutional cooperation. Norwegian expertise is good, but many advisers have a technical approach that is too narrow.[110] A 2006 Norad evaluation of assistance to the power sector argued that due to the lack of tendering processes in institutional collaboration, they are often offer-driven, and that Norwegian agencies thus are protected from cost-effective competition.[111]

In an interview, the Ministry of Foreign Affairs acknowledges that the skills Norwegian partners offer are not always what the recipient institution has the greatest need of. In some cases, the recipient has taken the initiative to extend the collaboration to cover areas outside the core competence of the Norwegian institution. According to the Ministry, the wishes of the recipient have in many cases been fulfilled out of consideration for the recipient's responsibility to define the areas of cooperation. Norad

108) Ministry of Foreign Affairs (1998) "*Twinning for development*". *Institutional cooperation between public institutions in Norway and the South. Development through institutions? Sub-study 1.*

109) Norad (2007) *Institusjonssamarbeid i norsk bistand. Erfaringer med faglig bistand gjennom norske direktorater og departementer. En rapport til Norad*, p. 29 [In Norwegian].

110) Norad (2007) *Institusjonssamarbeid i norsk bistand. Erfaringer med faglig bistand gjennom norske direktorater og departementer. En rapport til Norad*, p. 32 [In Norwegian].

111) Norad (2006) *State of the art study: The long-term effects of assistance to the power sector*, p. 11.

related that they plan to follow the preparation of future institutional collaboration in detail, to ensure among other things that the areas of cooperation harmonise with the institutions' skills.

Results framework and common understanding of objectives

According to the grant administration rules, the Ministry of Foreign Affairs shall assess the design of the initiative during the planning process. This means that the Ministry will consider the purpose, objectives, planned outcomes, and quality of performance indicators of the initiative and whether relevant and reliable baselines are available.

In the plan for the Clean Energy for Development Initiative, the Ministry of Foreign Affairs emphasises that measurement and reporting of results require the definition of clear targets and associated indicators, and the stipulation of clear reporting requirements in the agreements.

Norad pointed out numerous deficiencies in the results framework during the planning of institutional cooperation between TANESCO and Statnett. Several indicators lacked baselines and the system was not prepared for follow up of goal achievement.[112] In an interview, Statnett stated that experiences from similar institutional cooperation show that it is difficult to find accurate baselines. Statnett also stated that the parties put a lot of effort into adapting the plans to the Ministry's standardised management tools used in the design of a project to identify resource use, results, planned outcomes and impact.

Statnett and the embassy shared the view that the results framework was of varying quality. Nevertheless, the formal partnership was initiated because both Statnett and TANESCO wanted a rapid start-up. Statnett and TANESCO were to establish baselines and prepare realistic work plans through the collaboration. Statnett's assessment was that it would have been difficult to maintain the motivation of key players in TANESCO if the start-up of the project had been further postponed. The embassy supported this view and approved the project document.

The mid-term evaluation of the institutional cooperation recommended that the results framework should be changed before the second phase of the project was initiated. A review of the project plan for Phase 2, which was launched in 2013, shows that several of the shortcomings of the results framework still exist. Many of the planned direct results lack baselines, targets and methods for verifying results. In the annual report from 2013, indicators other than those stipulated in the plan are sometimes reported. A number of the defined goals do not have quantifiable indicators. Nevertheless, the progress reports specify results of project activities as percentages. For example, the annual report for 2013 cites a goal attainment rate of 60 per cent against the annual milestone of 70 per cent for the "Skills requirements" indicator, while a goal attainment rate of 30 of 50 per cent is given for the "Changes in the content of the sector plan" indicator. What the percentage figures refer to is not clear.[113] It is also not clear which problems the project is intended to solve.

The embassy in Tanzania acknowledged in an interview that it is difficult to be clear about the reporting requirements for this type of project. The requirements must be manageable and understandable to all parties. It has been difficult to translate Statnett's technical knowledge into an understandable results framework, and the

112) Norad (2008) *Twinning arrangement between Tanesco and Statnett. Preliminary Assessment of the draft Project Document* and Norad (2009) *Twinning arrangement between Tanesco and Statnett. Preliminary assessment of the revised Project Document*.

113) *Annual Report 2013. Twinning arrangement between Tanesco and Statnett. Attachment 3, KPI Reporting TANESCO/Statnett Twinning project, Phase 2.*

reporting requirements have not been properly understood by TANESCO. Statnett acknowledged that it is difficult to measure the results of this type of learning and change projects. The parties in the institutional cooperation received aid from the embassy to plan better indicators for measuring results. It did not, however, help ensure that the project focused on the right areas. According to the embassy, the basis for improved performance reporting was strengthened because of the quality of the Phase 2 planning of the project.

The progress and annual reports from the project provide information on the activities carried out and direct results, but provide less information about the long-term effects and how the project contributes to achieving the overall goals. The Ministry of Foreign Affairs pointed out that the latest annual report shows several results achieved in 2013, including a new investment handbook and draft grid development plan.

According to the mid-term evaluation, progress and annual reports, TANESCO does not use completed analyses and studies for future planning, and acquired systems and software are not used. It is thus difficult to assess how TANESCO has benefited from the collaboration.

At annual meetings for the project, the embassy requested that the reporting place more emphasis on results achieved than on implemented activities. According to the embassy, the reports should also be much clearer regarding progress towards the overarching goals of the collaboration.

Several Norad-funded evaluations show weaknesses in the results frameworks in projects in capacity building.[114] In 2006, a comprehensive evaluation of the long-term effects of Norwegian aid to the power sector pointed out that there was a serious lack of relevant indicators that are necessary for performance reporting and measurement of the effects of the projects.[115] A lack of baselines and performance indicators was also pointed out as a weakness in institutional cooperation reviews in Uganda and Ethiopia from 2012.[116] In the mid-term review of an institutional cooperation in Liberia, it was pointed out that the performance measurement system partially lacks logical coherence and is too extensive, which is probably why objectives and results are not reported on in annual reports.[117]

Several embassies in the core countries for the Clean Energy for Development Initiative emphasised the importance of a results framework of good quality. The embassy in Mozambique pointed out that it will be difficult to specify and measure the results without a good performance framework and agreement on indicators for measuring results. A common understanding of the objectives and implementation methodology is also important. The embassy with responsibility for Liberia stated that it is difficult to develop indicators that can measure effects, and that it is important to set realistic goals for capacity building.

114) Norad (2006) *State of the art study: The long-term effects of assistance to the power sector*, p. 12, Norad (2007) *Evaluation of Norwegian Power-related Assistance*, p. 15; Royal Norwegian Embassy Addis Ababa (2010) *Comments and recommendations on the Draft Project Document for Institutional Cooperation between the Ministry of Water and Resources (MoWR) and Norwegian Water Resource and Energy Directorate*, p. 3.

115) Norad (2006) *State of the art study: The long-term effects of assistance to the power sector*, p. 12.

116) Norad (2012) *UETCL-Statnett twinning arrangement: End-review of 2009–2011 phase 2 and appraisal of 2012–2016 phase 3 proposal. Final report* and Norad (2012) *Mid-term Reviews of the Institutional cooperation between NVE and MOWE and Technical Support to ENTRO*.

117) Norad (2013): Mid-term review of Norwegian financial support to the energy sector in Liberia.

4.4.3 Ownership and capacity of recipient

Both Norad and NVE have pointed out that the recipient institution must have ownership of the project and the capacity to prioritise and implement it.[118] This is supported by earlier evaluations of Norwegian aid to the energy sector and institutional cooperation through multiple Norwegian agencies and ministries.[119]

The World Bank's Capacity Development Results Framework points out that in order to ensure ownership and anchoring of the project in the organisation, key persons who could be driving forces for the planned changes in the institution must be identified in the planning phase. Identifying agents of change who can lead change processes in the organisation is crucial. These agents are often influential individuals or groups. Capacity development takes place by educating agents of change, and activities should be developed to ensure the empowerment of agents of change through learning.[120]

Experience from institutional cooperation between Statnett and TANESCO confirms the importance of identifying key people who can drive the change process in the organisation forward. In an interview, Statnett stated that it was difficult to identify who should have the main responsibility in TANESCO for the collaboration, since the planning meetings were attended by a continual series of new persons. According to Statnett, relationship building with TANESCO employees was demanding.

Statnett stated in an interview that frequent replacement of project personnel and senior management presented a need to reanchor the project in TANESCO. According to Statnett, it has negatively impacted progress and TANESCO's ownership of the outcomes. The second quarter report for 2013 pointed out that the consequence has been that activities, especially in the corporate strategy and management working group, have been changed or cancelled due to lack of interest from TANESCO's management.

According to the agreement between the parties, TANESCO is to report results directly to the Norwegian Embassy, and Statnett is responsible for quarterly progress reports to TANESCO. In an interview, Statnett related that in practice they have drafted all formal reports, both progress and annual reports.

The Ministry of Foreign Affairs pointed out that the development of TANESCO into an efficient company is a political priority and that the board and senior management of the company have taken ownership of the project. According to the Ministry, turbulent working conditions, such as the replacement of management and personnel, a power crisis and various necessary tasks, made it difficult for TANESCO to follow up individual project activities with staffing and necessary decisions.

A majority of embassies in the core countries report that they have experienced that ownership and prioritising by the authorities are important for the outcomes of capacity building.[121] For example, the embassy in Mozambique pointed out that without real interest and early effects of the work, institutions have a tendency to downgrade the activities in favour of more pressing matters and daily operations. The embassy with responsibility for East Timor emphasised that institution building is complex and time-consuming, and it is important that the activities are prioritised.

118) NVE (2012) *Erfaringer med institusjonssamarbeid og forslag til tiltak* [In Norwegian] and Norad (2001) *Guidelines for institutional cooperation*, p. 7.
119) Norad (2007) *Evaluation of Norwegian Power-related Assistance. Final report,* pp. 40 and 61, and Kruse (2007) *Institusjonssamarbeid i norsk bistand. Erfaringer med faglig bistand gjennom norske direktorater og departementer. En rapport til Norad*, p. 26. [In Norwegian]
120) World Bank Institute (2009) *Capacity Development Results Framework*, pp. 4 and 10.
121) The embassies' responses to a list of questions from the OAG.

Prioritisation by the authorities is paramount according to the embassy. The embassy in Nepal stated that some capacity-building projects have not been successful due to a lack of institutional anchoring. The embassy noted that institutional anchoring is critical.

Several evaluations of institutional cooperation cite a lack of ownership and capacity. Among other things, the mid-term evaluation of the institutional cooperation between NVE and Ethiopia's Ministry of Water and Energy shows that relations are lacking between NVE and the Ministry, and that the Ministry of Water and Energy lacks personnel and has a high turnover of staff.[122] According to the mid-term evaluation of the cooperation between Statnett and the Uganda Electricity Transmission Company (UETCL), management should provide all employees with a clear mandate to prioritise project activities, and that it is vulnerable to changes of staff. The evaluation notes that staff stability is critical for ensuring long-term utilisation of expertise in the organisation.[123] The mid-term review of the institutional cooperation with the energy ministry in Liberia emphasised that ministry employees lack the prerequisites to absorb new knowledge, and that the Ministry's budget does not provide employees with the means to exercise what they have learned in practical work. This makes it difficult to achieve goals. The evaluation also reported positive experiences in the work areas where long-term advisers from NVE and dedicated employees of the organisation participated.[124]

TANESCO's financial and organisational challenges

TANESCO's financial deficits are increasing. For the fiscal year that ended in June 2013, the budget overrun was 370 per cent,[125] and by the end of 2013 the company had a debt of approx. NOK 3 billion.[126] TANESCO's financial deficit was equivalent in 2012/2013 to about 1.4 per cent of Tanzania's GDP.[127] The Energy and Water Utilities Regulatory Authority (EWURA) approved increasing electricity prices by 40 per cent from 1 January 2014. However, it is unclear how much impact the price increase would have on TANESCO's financial situation because the price paid by a relatively large share of the customers is very low in principle.[128] In an interview, EWURA noted that TANESCO can also reduce operating expenses by using cheaper production technology and by investing in more reliable energy sources than water. All expenses are combined in TANESCO's overview of expenditures. This makes it difficult to identify cost drivers.

The Ministry of Foreign affairs stated that the price increase in 2014 comes in addition to a 40 per cent increase in 2012. After the tariff adjustment, TANESCO has had smaller deficits, but continues to accumulate debt. TANESCO has taken out loans and received large transfers to break even financially.

122) Norad (2012) *Mid-Term Review of TANESCO-Statnett*, pp. iv and 28.
123) Norad (2012) *UETCL-Statnett twinning arrangement: End-review of 2009–2011 phase 2 and appraisal of 2012–2016 phase 3 proposal*. Final report Norplan, 3 April 2012.
124) Norad (2013): Mid-term review of Norwegian financial support to the energy sector in Liberia.
125) The World Bank, Dar es Salaam (2013) *Rapid Budget Analysis 2013. Synoptic Note*, draft 15 November 2013, p. 25.
126) Joint Energy Sector Group (2012): *Joint Energy Sector Review*, p. 17.
127) International Monetary Fund (2013) *United Republic of Tanzania: Sixth Review Under the Policy Support Instrument, Second Review Under the Standby Credit Facility Arrangement, and Request for Modification of Performance Criteria—Staff Report; Press Release on the Executive Board Discussion; and Statement by the Executive Director for Tanzania,* p. 8.
128) *Electricity Tariffs to go up by 40 per cent on January 1*, The Citizen, 24 December 2013 and *TANESCO Tariff Review Application* from September 2013 (TANESCO's application to EWURA for tariff increase).

Box 4 TANESCO's expenses

The increased share of electricity produced with oil and gas has led to higher production costs for TANESCO. Production is expensive and the agreements TANESCO has entered into with private vendors to maintain production levels are also expensive.

Another cause of the problems is that the government adopted an emergency power supply plan in 2011 after hydropower generation was affected by drought. It is estimated that a similar drought in 2006 caused financial losses of up to 4 per cent of GDP.

The emergency supply plan includes agreements to purchase electricity from private oil and gas power producers at high prices. The hydroelectric power TANESCO produces costs NOK 0.25–0.30/kWh. Production and purchase of gas costs NOK 0.35–0.40 /kWh, and agreements to purchase oil power cost TANESCO NOK 1.80–2.50/kWh.

TANESCO must pay the private producers per unit of purchased power and fixed monthly capacity charges, regardless of how much power is actually purchased. In 2012, these fees amounted to approximately NOK 100 million a month. The electricity prices that Tanzanian consumers pay are significantly lower than what TANESCO pays for producing or purchasing the power. This means that TANESCO, in practice, sells heavily subsidised electricity to consumers.

Sources: *Africa Infrastructure Country Diagnostic 2012* and *Joint Energy Sector Review 2010/2011,* p. 27.

In an interview, the embassy in Tanzania noted that TANESCO has serious financial and organisational issues. Statnett stated in an interview that the purchase of fuel for power plants and emergency repairs therefore take precedence over other activities. Participants in the institutional cooperation stated in an interview that although activities are decided on, TANESCO often does not have the means to implement them.

In interviews, employees of TANESCO pointed out that the lack of funding from TANESCO contributes to many problems. According to a participant in the working group, it is very difficult to meet deadlines because the equipment, hardware, training and special skills are not available. TANESCO also often postpones acquiring equipment necessary to carry out project activities.

Employees of TANESCO also stated that those who have received training in Norway have not shared their skills with their colleagues. There is little time for transferring knowledge on busy workdays, and there is therefore little to ensure that the knowledge is utilised throughout TANESCO. This weakness is compounded by the fact that employees who have received training, find new jobs because they have become more attractive in the labour market.

Mozambique's power company, *Electricidade de Mozambique* (EDM), also faces significant financial challenges.[129] In its activity plan for 2011, the embassy in Mozambique noted that EDM is considered one of the best power companies on the African continent in terms of increasing access to electricity. In 2011 it took on more than 163,000 new customers. Nevertheless, the company posted huge losses as a result of tariffs that do not reflect development costs, but are politically determined. Earnings and debt servicing goals have not been reached. Given the importance of the institution, the embassy in Mozambique still considers it appropriate to retain EDM as an important partner.

129) Norad (2013) *Impact assessment of rural electrification.*

4.5 The energy and climate initiative Energy+

The energy and climate initiative Energy+ was launched in October 2011 by Norway's Prime Minister and the UN Secretary-General. The initiative is an international partnership. The Ministry of Foreign Affairs stated that the initiative had 46 international partners at 10 July 2013. According to the Ministry, the international support shows that Energy+ has been a successful initiative.

Energy+ aims to increase access to energy services through increased development of renewable energy and improved energy efficiency. According to Proposition 1 S (2013–2014), the initiative will engage the private sector and trigger commercial investments in the energy sector.

Energy+ has a phased approach to performance-based funding. According to Proposition 1 S (2012–2013), the initial stage is aimed at developing methods for implementing performance-based aid. Performance-based aid means that the payments depend on performance in terms of increased access to energy services, increased renewable energy production and more climate-friendly development in the energy sector. A performance basis requires the Ministry, in the initial stage, to assist countries through traditional means such as capacity building and technical assistance. According to Proposition 1 S (2012–2013) this shows the relationship between Norway's bilateral clean energy efforts and the international renewable energy initiative Energy+.

In 2011, Norway's Prime Minister Jens Stoltenberg launched the multilateral initiative Energy+ together with UN Secretary General Ban Ki Mon. Photo: Trond Viken, Ministry of Foreign Affairs.

The Ministry of Foreign Affairs has signed energy cooperation agreements with Bhutan, Ethiopia, Kenya and Liberia. The Ministry will also sign an overarching Energy+ agreement with Nepal in 2014.[130] In Ethiopia and Bhutan, the Ministry has signed five-year cooperation agreements of NOK 500 and 100 million, respectively, and in Kenya and Liberia, the Ministry has signed five-year letters of intent.

130) Minutes of the energy adviser meeting on 18–19 December 2013, p. 6.

The Ministry related that there is an intention to support Kenya and Liberia with NOK 250 and 100 million, respectively.[131]

The Ministry disbursed NOK 20 million to Ethiopia in 2012.[132] The grants portal[133] shows that the Ministry has not made further payments to Energy+ as of 31 March 2014, and that less than 2 per cent of the agreed amounts has been paid. No scheduled payments for 2014 or subsequent years have been registered.

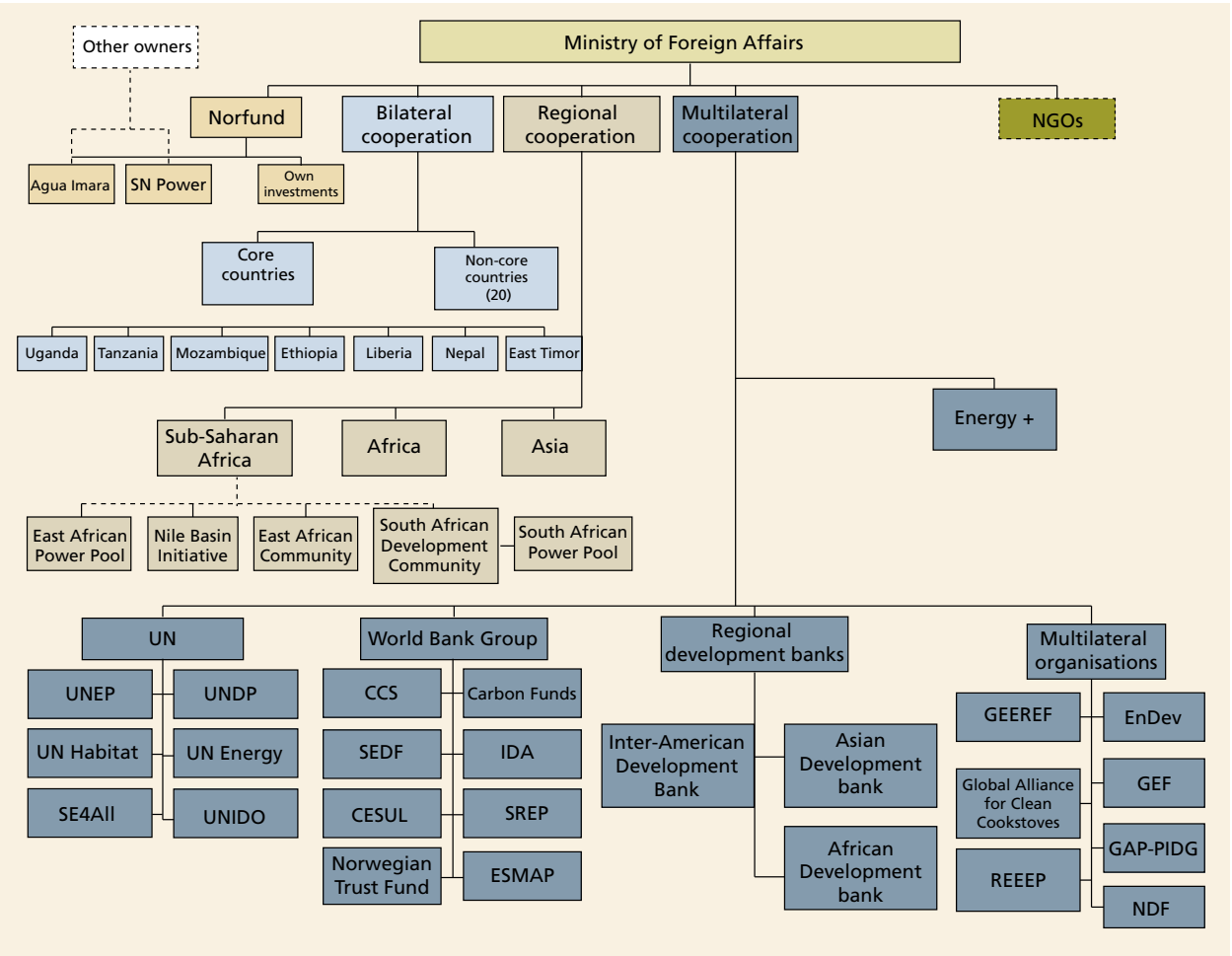
131) Norad, *Energy for sustainable development. Annual report 2012*, p. 28.
132) Norad's *Norwegian Aid Statistics* database.
133) The Ministry of Foreign Affairs' grants portal provides an overview of all Ministry and Norad grants on which agreements have been entered into for payment of funds in the current year and up to four subsequent years. The overview shows the countries where the grants will be used, the grant recipients with which the Ministry and Norad have agreements and which sectors are receiving support. See http://udtilskudd.regjeringen.no/#/nb/country?year=2013.

5 The Ministry of Foreign Affairs' and the embassies' management of the aid to clean energy

The Ministry of Foreign Affairs has the overall responsibility for the management of aid to clean energy, and the embassies have responsibility for achieving the programmed results with the grant funds they are allocated in the Ministry's allocation document. The embassies consult Norad for satisfactory quality assurance in accordance with the requirements of the various scheme regulations.

The Clean Energy for Development Initiative is organised as a project and is led by the Ministry of Foreign Affairs with the participation of several ministries.[134] Norad serves as the secretariat for the initiative and has special responsibility for quality assurance and performance monitoring. The embassies have an important role in implementing the initiative.[135] Energy+ is managed by a dedicated secretariat in the Ministry.

Figure 9 Recipients of Norwegian development assistance to clean energy*



*See list of acronyms in Appendix 3.

Source: Norad, *Energy for sustainable development, annual report 2011*

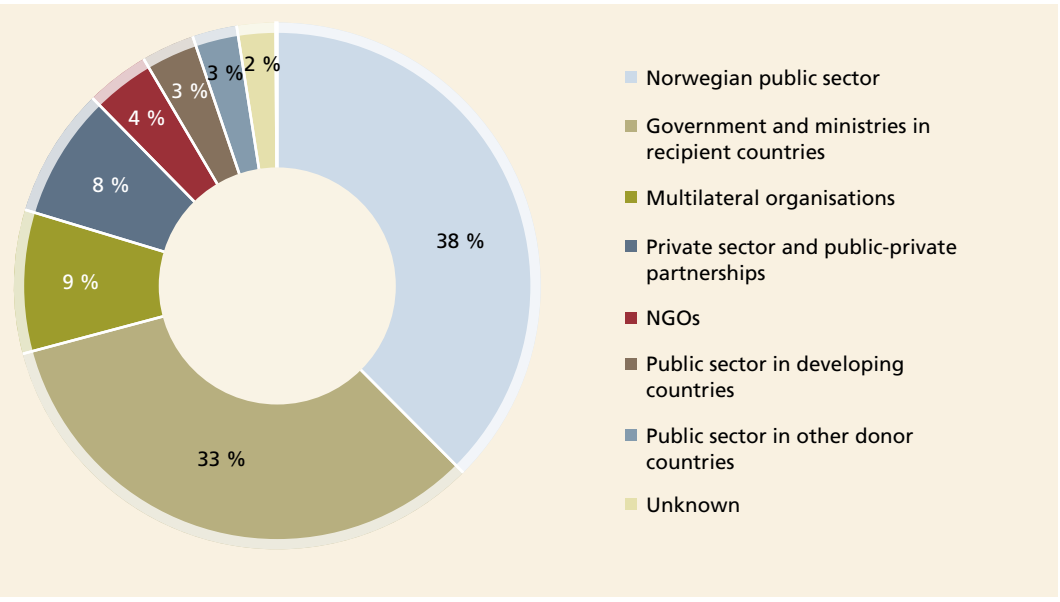
134) Ministry of Climate and Environment and Ministry of Petroleum and Energy.
135) Ministry of Foreign Affairs and Norad, *Plan for the Clean Energy for Development Initiative* (2007).

Figure 9 shows that the development assistance to clean energy is distributed among many partners and countries. This means that the aid goes through several different administration systems. In 2013, the bilateral aid was transferred to seven core countries and twenty other recipient countries, and is administered by the Norwegian embassies. The core countries are Ethiopia, Liberia, Mozambique, Nepal, Tanzania, Uganda and East Timor. In an interview, the Ministry of Foreign Affairs related that the priority countries in the Clean Energy for Development Initiative have on the whole been receiving Norwegian aid to the energy sector for many years and were established partner countries when the initiative began. When choosing a partner country it is often the embassies that provide input to the Ministry on whether the energy sector is suitable for support. In other cases, aid to a country is a result of the wishes of the political leadership of the Ministry.

Figure 9 also shows that the World Bank, regional development banks and several UN agencies are recipients of the multilateral aid managed by the Ministry of Foreign Affairs in Oslo. In 2012, approximately NOK 345 million was transferred to multilateral and regional organisations. This includes both core support[136] and support for programmes in clean energy. In addition, the Ministry supports various initiatives such as the Stoltenberg Government's energy and climate initiative, Energy+.

Figure 10 shows how Norwegian development assistance to clean energy is divided by type of recipient, i.e. the type of actor who receives money from the Ministry of Foreign Affairs on behalf of the recipient country.

Figure 10 Development assistance to clean energy 2000–2013 broken down by recipients of support



Source: Norad's *Norwegian Aid Statistics* database

Figure 10 shows that just under 40 per cent of the development assistance to clean energy in 2000–2013 went through the Norwegian public sector. In 2012 this share was 54 per cent. A large share of this is investments through Norfund. This category also includes actors such as Statnett and NVE, which receive funds for capacity building projects in developing countries. The public sector in the recipient countries

136) Core support consists of funds that the Ministry of Foreign Affairs transfers to organisations without putting constraints on which countries or types of projects and programmes will receive funding. This is in contrast to earmarked funds allocated to specific projects related to a specific sector or geographic region. Source: http://www.norad.no/no/om-bistand/tallenes-tale/tallenes-tale-bistand-til-multilaterale-organisasjoner. Retrieval date 28 February 2014.

received one-third of the aid. This percentage decreased during the period, partly because the aid has supported fewer national power development projects since the mid-2000s. The private sector received a small portion of the support, as did Norwegian and international non-governmental organisations. This suggests that the Ministry of Foreign Affairs has concentrated its efforts on key institutions in recipient countries and given less priority to measures at the local and regional level.

5.1 The Ministry of Foreign Affairs' plans and strategies

Norwegian development assistance has supported the energy sector in selected partner countries for decades. In 2005, the Ministry of Foreign Affairs appointed a working group ("the Power Group") to study strategies and actions to increase Norwegian efforts in the power sector in developing countries. The power group suggested three main strategies:

1 Reinforced broad Norwegian commitment to the development of the power sector

2 Focus on selected countries and regions

3 Significantly increased focus on investments in the sector[137]

The priorities and initiatives in the power sector were intended to support Norwegian development policy goals and strategies such as poverty reduction and achievement of the Millennium Development Goals, prioritisation of the least developed countries and good donorship and fulfilment of climate obligations.[138] Good donorship, among other things, is about recipient responsibility and national ownership.

In 2006, the focus on clean energy had, through the Norwegian Action Plan for Environment in Development Cooperation, a clear focus on poverty and a comprehensive approach to improving poor people's access to clean energy. According to the action plan, increased access to stable energy services at affordable prices *for the poorest* is crucial for achieving the Millennium Development Goals. Simple and decentralised solutions will be important in this context. According to the 2007 plan for the Clean Energy for Development Initiative, the main goal is to increase access to clean energy at affordable prices and to promote economic and social development in selected developing countries. Increasing poor people's access to energy is thus a more central objective of the Norwegian Action Plan for Environment in Development Cooperation than of the plan documents [139] for the Clean Energy for Development Initiative.

According to the 2007 plan for the Clean Energy for Development Initiative, the focus up to 2015 was intended to be on seven areas (see Box 5). The initiative places the greatest emphasis on supporting national efforts to strengthen the legal and policy framework and major power developments. Also supported are initiatives at the local level, such as rural electrification with solar energy and more efficient wood stoves. Recommended energy measures are generally formulated, and most actions will therefore be in line with the guidelines in the initiative.

137) *Forslag til strategi og tiltak for å fremme norsk innsats i kraftsektoren i utviklingsland.* (Proposed strategies and actions to promote Norwegian efforts in the power sector in developing countries.) *Power for development – power to the poor.* Recommendation of the working group appointed by the Ministry of Foreign Affairs, 14 November 2005, p. 4.

138) *Forslag til strategi og tiltak for å fremme norsk innsats i kraftsektoren i utviklingsland.* (Proposed strategies and actions to promote Norwegian efforts in the power sector in developing countries.) *Power for development – power to the poor.* Recommendation of the working group appointed by the Ministry of Foreign Affairs, 14 November 2005, p. 18.

139) The Ministry of Foreign Affairs and Norad, *Plan for the Clean Energy for Development Initiative* (2007) and *Action Plan 2009–2012* (2009).

Box 5 Priority areas for development assistance to clean energy

- The development of national frameworks (legislation, regulation, institutions, etc.) that will encourage investment in the production of clean energy and energy efficiency
- Regional and national energy planning, infrastructure development and trade
- Investments in national and regional energy infrastructure (production, transmission and distribution) and power trading
- Electrification in rural areas and small-scale energy production from various sources (hydro, solar, biomass, wind)
- Development of integrated solutions that will contribute to local industrial development
- Development of knowledge, expertise and technology
- Analyses of access to, control over, the need for, trade in and management of clean energy in developing countries

Source: The Ministry of Foreign Affairs and Norad (2007) *Plan for Clean Energy for Development Initiative*

The Ministry of Foreign Affairs reduced the number of priority areas from seven to two in the 2009 action plan for the Clean Energy for Development Initiative. One area concerns the mobilisation of private investments and direct support for infrastructure, and the second priority area emphasises environmentally friendly energy measures. These were to be prioritised until 2011. Recommended actions under the two priority areas involve most of the seven priority areas as defined in the 2007 plan for the Clean Energy for Development Initiative.

The 2009 action plan contains no clearly defined goals, specific activities or a clear timeframe for investment in clean energy. The formulations in the plan are in the form of recommendations, and do not specify to any great degree that anything *must* be implemented. The plan defines a time period (2009–2012), but says nothing about what is to be done when, or in what order.

The action plan states that the Ministry of Foreign Affairs, in consultation with the embassies, shall specify the recommended guidelines in the detailed activity plans that outline goals, projects and expected outcomes, and that establish responsibilities and set deadlines. The audit shows that since the Clean Energy for Development Initiative was launched in 2007, the Ministry of Foreign Affairs, in the letters of allocation, only asked the embassies in Uganda and Nepal to concretise their commitment to clean energy. The audit also shows that the embassies have not developed detailed activity plans for the development assistance to clean energy, as directed by the action plan.

The summary from the energy adviser meeting in Uganda in 2009 stated that the action plan is a useful document if an embassy already has a plan for the measures it is to work on. On the other hand, the plan does not help the embassies to prioritise initiatives at the country level because it encompasses so many goals and concerns. Energy advisers at the Norwegian embassies and representatives from the Ministry in Oslo and Norad attended the energy adviser meeting.

The Ministry of Foreign Affairs was to consider the sustainability of the Clean Energy for Development Initiative after two years, update the 2009 action plan annually and conduct a mid-term review of the Action Plan for Environment in Development Cooperation.[140] None of these measures have been implemented.

140) Ministry of Foreign Affairs and Norad, *Plan for the Clean Energy for Development Initiative* (2007), p. 1, *Action Plan 2009–2012* (2009), p. 5, and the *Norwegian Action Plan for Environment in Development Cooperation* (2006), p. 23.

5.2 The Ministry of Foreign Affairs' governance through letters of allocation

The restructuring of aid administration in 2004 comprised a new division of work among the Ministry of Foreign Affairs, Norad and the embassies. The switch to decentralised management has had practical consequences for the level at which decisions are made, and has given greater decision-making power to the embassies. In an interview, the Ministry noted that the embassies anchor strategies and projects of a certain size in the Ministry, and in some cases with the Ministry's political leadership.

The Ministry reported that the current management structure with a high degree of decentralisation and delegation to the embassies is partly due to the previous government's decision to implement organisational changes, cf. Proposition No. 1 (2003–2004) to the Storting. The Ministry justifies the high degree of delegation with the belief that the embassies' local knowledge will help to ensure that the decisions that are made provide the best and most sustainable results in each partner country.

The embassy in Tanzania stated in an interview that the reform has granted the embassies the opportunity to act more securely and predictably externally, since they can make more decisions without too many rounds with the Ministry centrally. The challenge of the organisational structure is to ensure an integrated approach to energy aid across the priority countries. This includes how performance is measured on a global level, and how the Ministry ensures the exchange of experience between embassies.

The Ministry stated that it is working to ensure a comprehensive approach to energy aid. Among other things, the Ministry has established a unified budget item for clean energy from 2013 and in March 2014 the decision was made to create a new department in the Ministry to gather energy expertise in one section. Commercial development, and climate and environment are part of the same department.

The Ministry lays down overall strategic guidelines for the embassies' work in the annual letter of allocation. A review of the letters of allocation to the embassies in 2007–2013 confirms that the Ministry's management is at a general level. The Ministry gives the embassies considerable room to act. The Ministry largely agrees with the embassies' priorities and assessments and specifies the topics the embassies are to concentrate on. The Ministry does not refer to the clean energy initiative in the allocation letters to the embassy with responsibility for East Timor, even though East Timor is one of seven core countries in the Clean Energy for Development Initiative.

The embassies in Energy+ partner countries appear to be followed up more closely by the Ministry. The embassy in Ethiopia stated that it is in close dialogue with the Energy+ unit in the Ministry, and that it received four follow-up visits from the Ministry in 2013. The embassy with responsibility for Liberia stated that the Ministry has participated in numerous meetings on energy in the country and that the Ministry in particular has provided guidance on results in Energy+.

5.3 The embassies' priorities

The Ministry of Foreign Affairs' letters of allocation, policy guidelines in white papers, the action plan for the Clean Energy for Development Initiative and the annual budget propositions govern the embassies' priorities. The embassy in Nepal and the

embassy with responsibility for Liberia, which is a partner country in Energy+, stated that Energy+ documents also contain important guidance from the Ministry.[141]

The Ministry of Foreign Affairs has overall responsibility for policy design, country selection and support through multilateral organisations and other international initiatives in the energy field. In an interview, the Ministry stated that strategies and instruments are developed in close cooperation with the embassies and Norad through meetings, telephone conferences and e-mail exchanges. The embassies have primary responsibility for quality assuring that the strategies and the selected instruments fit into the recipient country's energy priorities and ability to follow up. Norad provides the embassies with expert advice and guidance in this process.

5.3.1 Background for the embassies' priorities

According to the plan for the 2007 Clean Energy for Development Initiative, the quality of the aid shall be strengthened by increased emphasis on analytical work. In the 2009 action plan, the Ministry of Foreign Affairs stated that part of the purpose of the initiative was to contribute to better prioritisation of the aid.

In an interview, the Ministry stated that it does not require the embassies to prepare their own plans or strategies for energy aid. The guideline in the 2009 action plan stating that such analyses should be drawn up at national level has not been followed up by the Ministry. According to the Ministry, whether an embassy needs to prepare its own analyses varies from country to country.

Embassies previously prepared three-year strategic plans and letters of intent with partner countries. In a letter, the Ministry stated that the strategic plans were an important management tool after the restructuring of aid management in 2004 until the autumn of 2011. The plans formed the basis for the Ministry's discussions with the embassies regarding the long-term orientation of development cooperation. The embassies' aid portfolios were designed on the basis of these discussions, technical input from Norad and the current political priorities. The embassies were given written feedback on the plans, and decisions were reflected in the allocation of budget funds in the allocation documents.

The review of a sample of strategic plans shows that the documents contain, among other things, information about ongoing Norwegian-supported aid measures, implementation risks and future priorities. The audit shows that the plans indicate what is decided, but they include little information about the background for the embassies' decisions and priorities.

In addition to three-year strategic plans, the embassies prepare activity plans that, among other things, specify the main priorities for the individual embassies. A review of activity plans for the period 2007–2012 shows that they also contain little information about the basis of the embassies' priorities and decisions. The Ministry stated in a letter that this primarily emerged in the strategic plans for the development cooperation in the period.

The Ministry also stated that the Ministry discontinued the preparation of three-year strategic plans in 2012. Instead, the long-term planning was included in the work on the annual activity plans that include strategic objectives and country-specific orders from the Ministry. The review of the embassies' activity plans from 2013 shows that these also state what is decided, but that they include little information about the background for the embassies' decisions and priorities.

141) Responses to list of questions from the OAG, December 2013.

The audit also shows that embassies do not prepare their own analyses as the basis for the embassies' work within the Clean Energy for Development Initiative. In response to questions about which analyses guide the embassies, the embassies submitted very diverse documents ranging from the partner country's national plans and legislation to investment plans and mid-term evaluations.

The review of activity plans for the period 2000–2013 shows that the aid portfolios of the embassies in Tanzania, Nepal, Mozambique and Uganda cover large parts of the Ministry's range of instruments in development assistance to clean energy and that the embassies spread the aid across many small and large projects without making clear priorities. The activity plans for the clean energy core countries show, for example, that the embassy in Ethiopia has focused on feasibility studies in the Blue Nile and capacity building in the government. The embassy with responsibility for Liberia has chosen to focus its efforts on the development of power lines and capacity building, while the embassy with responsibility for East Timor has prioritised capacity building. The activity plans for the embassy in Nepal mention many items among Ministry's range of instruments, such as rural electrification, mobilisation of the private sector, capacity building, power development, institutional cooperation and policy dialogue with the authorities, as priority areas for the period 2007–2013.

5.3.2 The embassy's priorities in Tanzania

According to the embassy in Tanzania, the Tanzanian authorities do not have a unified set of priorities or a list of projects for which they want support in the energy sector. The embassy noted that the priorities and project portfolio for the collaboration will be developed in dialogue with partners in the recipient country. The dialogue with the authorities in Tanzania can be improved. According to the embassy, the authorities conduct their affairs in ways that are often poorly coordinated and sometimes in conflict with each other, and the embassy therefore has to speak with several actors to clarify needs and priorities.

The embassy also stated that it has certain ideas about potential areas of cooperation based on Norway's comparative advantages, but the Tanzanian authorities do not always agree. The recipient orientation must sometimes be modified in the sense that the embassy is the driving force in initiating projects. This applies particularly to the development of the legal and policy framework and strengthening of expertise in national institutions.

In recent years, a long list of donors have wanted to get involved in the energy sector in Tanzania. The Swedish International Development Cooperation Agency, Sida, pointed out in an interview that such involvement can be challenging because the government's implementation capacity is weak. In an interview, the embassy in Tanzania stated that many donors only give priority to supporting isolated systems that are more suitable for private investment. However, there is a limit to what can be accomplished, because the private sector in Tanzania is weak and struggles with poor framework conditions. Many donors therefore have problems finding projects that are good enough to support.

Representatives from NGOs in Tanzania emphasised in the focus group meeting that the Tanzanian authorities must analyse the energy resources of the country to clarify the energy potential of different parts of the country. Only when this information is available can the government make more informed decisions about which technology is best suited to the different parts of the country.

5.4 The embassies' reporting of results

The embassies in core countries cited telephone conferences and energy adviser meetings as key forums for dialogue between embassies and the Ministry of Foreign Affairs on priorities and results.[142] The embassies also annually report aid results to Norad's annual report on clean energy.

The Ministry stated that in the activity plans, the embassies are only asked to give a brief report on the embassy's overall operations and goal attainment throughout the year. Annual result reports are ordered by the Ministry in March each year. The embassies report according to a fixed template. The report includes the embassies' annual performance report on the use of grant funds and information for the Ministry's preparation of text for the Proposition 1 S draft resolution for the following year.

The activity plans for the four main core countries, Mozambique, Uganda, Nepal and Tanzania, contain extensive descriptions of the embassies' work and future plans in the energy sector. Most plans in 2007–2013 list aid agreements and measures, but provide limited information about specific results. The exception is the 2013 activity plans for the embassy with responsibility for Liberia and the embassies in Nepal, Uganda, Mozambique and Tanzania, which list the achieved results and relate them to energy investment targets.

The embassy in Nepal stated that it would focus more attention on performance reporting if the Ministry stepped up its requests for such reporting. It was emphasised that improved performance reporting would require the embassy to free up administrative capacity for analysis and reporting. According to the embassy, the management of individual projects, particularly in government-to-government aid, has claimed a disproportionate amount of processing capacity at the expense of strategic dialogue, analysis and reporting. As a consequence, the embassy has in recent years concentrated the portfolio on larger and fewer programmes, which in turn will contribute to improved reporting.

5.4.1 The data for result reporting

Reliable and valid data are necessary for enabling embassies to ensure that the energy portfolio is oriented towards the needs of the country, and for the embassies to be able to report and follow up results of the aid. Earlier audits of Norwegian aid have shown that a lack of reliable data is a major challenge for the reporting of results, cf. Document 3:4 (2010–2011) and Document 3:8 (2012–2013).[143]

In general, there are weaknesses in the data underlying performance reporting on Norwegian and international aid.[144] In an interview, the Swedish International Development Cooperation Agency, Sida, stated that the official access to energy in Tanzania increased from 10 to 14 per cent from 2007 to 2010. In 2013 it was reported to be 21 per cent. According to Sida, this is because the Tanzanian authorities have adjusted the size of households upward from 6 to 8 people. This means that the national access to energy appears to be increasing, although the number of connections has not increased. According to Sida, donors and the authorities have long disagreed about the method. However, according to the Paris Declaration, the donors are obliged to use official Tanzanian figures in their reporting. According to Sida, this means that donors report results they know are incorrect.

142) Responses to list of questions to the embassies, December 2013.
143) Document 3:4 (2010–2011) *The Office of the Auditor General's investigation into result orientation in Norwegian development cooperation* and Document 3:8 (2012–2013) *The Office of the Auditor General's investigation of Norwegian development aid to the health sector in Malawi.*
144) See for example Jerven (2013) *Poor Numbers. How we are misled by African Development Statistics and what to do about it.*

In an interview, the US foreign aid agency, the *Millennium Challenge Corporation* (MCC), confirmed that TANESCO's official reporting to the Ministry is not based on reliable statistics. The quality of the data on the energy sector in Tanzania is generally poor. According to MCC, TANESCO prioritises reporting data instead of analysing whether the data is correct, nor is the data used by the government as a basis for decision making.

The annual reports of the power company TANESCO and the Ministry of Energy and Minerals in Tanzania contain no official production figures. Nor do the annual donor-funded sector reviews include detailed data on production.

5.5 The introduction of the energy and climate initiative Energy+

The Ministry of Foreign Affairs related that part of the purpose of introducing Energy+ in addition to the Clean Energy for Development Initiative was to strengthen donor coordination in that several countries are involved as partners in the initiative. The intention is for Energy+ to develop the international partnership and direct, where relevant, the Norwegian clean energy efforts towards Energy+.[145] The Ministry has not developed a plan for how Norway's clean energy efforts are to be directed towards Energy+.

According to Proposition 1 S (2012–2013), Energy+ was launched in 2011 as a pilot project with two years' duration, and 2012 was the first year of the project. According to Proposition 1 S (2013–2014), efforts in 2012 were concentrated on initiating the first phase of signed agreements with Bhutan, Ethiopia, Kenya and Liberia. Numerous consultations were also held with the private sector to obtain views on the measures that are most effective for triggering private investment.

In 2013, the Ministry of Foreign Affairs was to assess goal achievement during the period, expectations for progress and long-term results, and whether the work will be continued, cf. Proposition 1 S (2012–2013). The Energy+ pilot project in February 2011 stated that a report on the experiences with the project was to be submitted at the end of the two-year period. The report was to form the basis for the decision on Norway's further involvement in Energy+. The Ministry related that no such report was prepared, but that experiences were assessed in 2013 and formed the basis for the Government's decision in April 2013 to continue Energy+ for four more years.

The development of Energy+ will be an ongoing process which means that roles and responsibilities may be adjusted over time. It is important that monitoring responsibilities are clear. The assignment of administrative responsibility for new commitments will be subject to clarification of fundamental principles. [146]

Management of Energy+ is divided among a number of actors from various ministries and specialist agencies and includes the Ministry of Foreign Affairs, Norad, the Ministry of Petroleum and Energy, the Ministry of Climate and Environment, the Norwegian Environment Agency and the Norwegian Water Resources and Energy Directorate. Energy+ is organised as a project with a project manager who reports to the Deputy Secretary General. While the Clean Energy for Development Initiative is largely managed by the embassies, Energy+ is centrally managed by the Ministry of

145) The Ministry of Foreign Affairs' memorandum *Styrket organisering av Regjeringens energi- og klimainitiativ (Energy+).* (Strengthened organisation of the Government's energy and climate initiative (Energy+)). The memorandum is not dated.
146) The Ministry of Foreign Affairs' memorandum *Styrket organisering av Regjeringens energi- og klimainitiativ (Energy+).* (Strengthened organisation of the Government's energy and climate initiative (Energy+)). The memorandum is not dated.

Foreign Affairs. Norad is also less involved in the management of Energy+ than in the Clean Energy for Development Initiative.

Norfund stated in an interview that the company does not participate in Energy+ because the framework conditions in the respective countries are too poor. In a memorandum to the Ministry of Foreign Affairs in 2013, Norfund pointed out that it is necessary to change tack from broad, rather unspecific initiatives, to a stronger focus on measures that increase the production of renewable energy in developing countries.

The minutes of the regional energy adviser meeting in Uganda in 2009 convey concerns over what is seen as a proliferation of new multilateral initiatives launched by the Ministry of Foreign Affairs and the large amounts that are channelled through these initiatives. The energy advisers have professional responsibility for energy aid at the embassies. In the summary from the energy adviser meeting in Mozambique in 2010, some energy advisers sought a more systematic collection of the embassies' experiences with Norwegian-supported clean energy aid through multilateral organisations. At the energy adviser meeting in Uganda in 2012, energy advisers[147] stated that experience with the bilateral commitment to clean energy is seldom used as a resource in Energy+ work.[148]

5.6 Management and reporting of Norfund's investments in renewable energy

Norfund's investments in renewable energy in 2007–2012 amounted to about half of the total Norwegian development assistance to clean energy. In the same period, 2.2 per cent of Norfund's investments in renewable energy have gone to the core countries for the Clean Energy for Development Initiative. In 2012, a single investment from its Brazilian subsidiary, SN Power, accounted for 36 per cent of the total Norwegian development assistance to clean energy.

According to Proposition 86 L (2012–2013), when Norfund was established in 1997, emphasis was placed on limiting the state's responsibility when investing in business activities in developing countries. Norfund was therefore organised as a company subject to special legislation. According to the same proposition to the Storting, it was important to prevent micro-management by the Ministry, while political authorities had the opportunity to establish the goals and framework for the activity.[149] Until June 2013, Norfund was controlled by establishing general instructions and through the annual budget propositions, Storting recommendations and letters of allocation.[150] According to Proposition 86 L (2012–2013), the Norfund Act lacked a clear instrument for exercising ownership powers corresponding to the general meeting of a state-owned limited liability company. After the amendment of the Norfund Act, cf. Statute 103 (2012–2013), the general meeting was adopted as the supreme body of Norfund based on the model of the Companies Act and State-owned Enterprises Act.

The Act and Instructions relating to Norfund specify that the company must invest in lower middle-income countries, other low-income countries and least developed countries (LDCs). In addition, the fund may invest in countries that the Storting has decided may receive aid under private sector schemes. According to Proposition No. 1 (2000–2001) to the Storting, the schemes may apply in some upper middle-income countries, provided that these are within the World Bank's threshold for providing

147) Energy and climate advisers employed at the embassies in Nigeria, Ghana, Ethiopia, Tanzania, Uganda, Mozambique, India, South Africa, as well as energy counterparts at the Ministry of Foreign Affairs, Norad and the embassy in Kenya.
148) Minutes of energy adviser meeting in Uganda, March 2012, Annex 2: The energy adviser meeting's message to Energy+. All of the energy advisers (see footnote 154) have signed the annex.
149) Prop. 86 L (2012–2013) Proposition to the Storting (bill) – Ministry of Foreign Affairs, p. 5.
150) Recommendation to the Storting No. 301 L (2012–2013) from the Standing Committee on Foreign Affairs and Defence.

loans on particularly favourable conditions (IDA loans). The annual budget propositions nevertheless emphasise that the least developed countries, particularly countries in Sub-Saharan Africa, must be prioritised.[151] A review of Norfund's investments in renewable energy shows that 64 per cent are made in the upper middle-income countries Chile, Brazil, Panama, Peru and South Africa. Of these, only Peru was within the threshold set by the Storting at the time of the investment.[152]

With the exception of South Africa, the aforementioned investments were made by the subsidiaries SN Power and Agua Imara. In an interview, the Ministry of Foreign Affairs stated that SN Power and Agua Imara may invest in any country that has been approved as a recipient by the OECD's Development Assistance Committee (ODA-eligible countries). These countries also include upper middle-income countries.[153] It means, however, that the countries in which SN Power and Agua Imara have invested, have a per capita GDP that is up to three times higher than that of the countries specified in the Norfund Act.

Proposition No. 1 (2008–2009) to the Storting pointed out that some of Norfund's investments through SN Power were made in countries that were not within the upper limit set by the Storting. In the proposition, the Ministry concludes that ownership of SN Power should continue, provided that the ownership interest in SN Power is used to benefit a particular focus on developing clean energy in Africa. The committee had no comments on this point in its recommendation.

According to Proposition 1 S (2012–2013), Norfund can also invest in all ODA-eligible countries. In an interview, Norfund stated that they have a positive view of the Ministry of Foreign Affairs' removal of the restriction on where the Fund may invest. According to Norfund, the change will not have any practical impact on the company's activities, since the strategic focus that investments in renewable energy shall prioritise Sub-Saharan Africa and the least developed countries, will remain unchanged.

In April 2013, Norfund pointed out in a memorandum to the Ministry of Foreign Affairs that development aid reporting gives a wrong impression. All Norfund's investments are currently reported to OECD's Development Assistance Committee as aid (*Official Development Assistance*, ODA[154]). This means that 40 per cent of SN Power's investments are recorded as aid because Norfund's stake in the company is 40 per cent. The size of Norfund's direct contributions to SN Power's investments does however vary. SN Power's investments can be financed by loans or returns from previous investments, and therefore do not depend on transfers from Norfund to the company. Norfund pointed out in an interview that funds should be reported as aid the moment the Storting allocates funds to Norfund, and not as Norfund's investments. The table below shows how such a change would be reflected in aid statistics.

151) See for example the budget propositions from 2001–2002, p. 119; 2005–2006, p. 162; and 2010–2011, p. 184.
152) See table in Annex 3.
153) The criteria for which countries can receive aid (or Official Development Assistance (ODA)), are defined by the OECD's Development Assistance Committee (DAC).
154) *Official Development Assistance* (ODA) is the OECD term for transfers of loans, gifts or technical development assistance that public authorities give directly to a developing country (state to state) or to multilateral organisations like the UN and the World Bank. Source: www.norad.no.

Table 5 Annual Storting appropriations to Norfund and Norfund investments reported as aid

Year	Appropriated by the Storting (new equity)	Part of the appropriation from the Storting earmarked for investments in renewable energy	Norfund's investments reported as development assistance (in NOK 1000)	Norfund's investments in renewable energy reported as development assistance (in NOK 1000)
2013	NOK 1.180 billion	At least NOK 590 million (50 %)		
2012	NOK 1.030 billion	At least NOK 515 million (50 %)	1 647 939	1 232 964
2011	NOK 1 billion*	NOK 485 million	1 715 903	681 038
2010	NOK 629 million	–	716 012	305 028
2009	NOK 585 million	–	351 203	–106 004

Source: Letters of allocation to Norfund 2009–2013 and Norad's *Norwegian Aid Statistics database*.

* In addition, NOK 6 million were earmarked for the hydropower project in Fula Rapids in South Sudan.

6 Assessments

A key goal of Norwegian development work is to reduce absolute poverty and lift people permanently out of poverty. Development of the energy sector is a prerequisite for developing countries to achieve economic growth. Increased access to clean energy at an affordable price is important in the fight against poverty, and according to the Standing Committee on Foreign Affairs, Norway's commitment to clean energy must include poverty-related measures and production of electricity from renewable energy sources.

Through bilateral aid, the Ministry of Foreign Affairs has provided support to build hydropower plants, either as direct support or through the investment fund Norfund. This has helped increase power generation in recipient countries. However, the audit shows that little direct support has been given to hydropower development in the seven clean energy core countries since 2000. Nor has support to the investment fund Norfund resulted in power development in the core countries.

The audit shows that Norwegian aid in the form of support for the development of central and distribution grids has helped to increase access to electricity. Meanwhile, the energy aid did not reach the poor to any great extent in 2000–2013. Few poor households connect to the power grid, and the Norwegian focus on increased production and distribution of energy has had a marginal impact on increasing business activity and employment. Only a small proportion of the energy aid directly funds measures for poor people in the core countries.

6.1 Norwegian development assistance has contributed little to increase access to clean energy

In Recommendation No. 269 (2008–2009) to the Storting, the Standing Committee on Foreign Affairs pointed out that Norwegian aid shall prioritise the development of hydropower, wind farms and solar parks for the production of power for the grid. Development of power plants requires large investments. The audit shows that the embassies provide little direct support for development, but support preliminary analyses that map the feasibility of projects and facilitate private investment and the development of national legislation. This approach has resulted in few development projects in the core countries and has consequently done very little to increase power generation.

The audit also shows that hydropower is still the main focus, although countries have ample opportunities to utilise solar and wind energy resources. Focusing solely on hydropower makes the recipient countries more vulnerable to failures in the energy supply than a broader focus on hydropower, wind and solar energy.

In Proposition 1 S (2013–2014), the Ministry of Foreign Affairs underlines that the Norwegian Investment Fund for Developing Countries, Norfund has played a key role in recent years in the government's commitment to renewable energy, and that it will be an even more important tool in this area. Norfund has a development policy mandate and is to contribute to the realisation of projects that private companies would not otherwise not have become involved in because of high risk. At the same time, individual investments must be profitable to enable the business that is established to be viable.

In 2007–2013 Norfund's investments in renewable energy accounted for nearly half of Norwegian development assistance to clean energy. During the period, Norfund attempted to increasingly direct its investments towards Africa and the least developed countries. However, only 2 per cent of the investments were made in the seven core countries in this period. Meanwhile, nearly two-thirds of Norfund's investments in renewable energy were made in upper middle-income countries. The audit shows that the framework conditions for private investments in the core countries are so weak that it is very difficult to find profitable renewable energy projects. Norfund's existing requirement for profitability makes the fund a poorly suited instrument for catalysing investments in countries with the weakest economic and legal framework conditions.

The Ministry of Foreign Affairs disbursed about NOK 2 billion in 2000–2013 to develop central and distribution grids in the seven partner countries. This accounts for about 60 per cent of the energy aid to these countries. According to the embassies, the aid provided more than 100,000 households with access to electricity. The extension of the central grid to rural areas has been given special priority by the embassies in Mozambique and Tanzania. In Mozambique, however, the development of the central power grid caused major financial losses for the national power company. The audit shows that there is a risk of the same effect for the national power company in Tanzania. The reason for this is that the authorities in these countries set an electricity price that is far below the cost of delivering power. The national power companies do not receive government transfers to compensate for the resulting financial loss. The straitened finances of power companies lead in turn to a lack of maintenance of power plants and power grids, and thus the risk of both frequent and lengthy power outages.

It is a prerequisite that the aid is based on the partner countries' own priorities. The Ministry of Foreign Affairs, however, has a responsibility to ensure that Norwegian aid is given to projects that are sustainable. Support for projects that have poor prospects for economic sustainability, weakens the possibility of long-term and stable energy supplies.

6.2 Development assistance to clean energy has reached the poorest to a marginal degree

In its discussion of Report No. 13 (2008–2009) to the Storting *Climate, Conflict and Capital*, a majority of the Standing Committee on Foreign Affairs expressed the opinion that Norwegian development assistance must focus more on solar energy and wind power plants, particularly where the poor rural population does not have access to other forms of renewable energy.

In the Ministry of Foreign Affairs' opinion, the development of the power grid is the most suitable solution to also help poor rural households gain access to electricity. Furthermore, the development of the power grid will lead to increased business activity and employment. However, the audit shows that the rural poor cannot afford to connect to the power grid where it has been extended. Connection usually costs between NOK 300 and 1,500 in Sub-Saharan Africa, an unattainable sum for many poor people who live on less than NOK 15 a day. This means that even if the power grid is rolled out to a village, large parts of the population will remain without access to electricity in their own homes. Norway has supported rural electrification in Zanzibar for decades. Final evaluations of the projects show that less than 10 per cent of residents in the villages that have been electrified, connect to the grid. This is less than the target for the projects, and it has resulted in a weaker development effect than

expected. The poor households have primarily benefited from electrification through better quality education and health care.

In Nepal, however, support for local solutions, such as solar panels and micro power plants, has provided about half a million households with electricity. The Ministry of Foreign Affairs, however, has supported few projects in the other six core countries that have benefited the poorest segment of the population.

The audit also shows that better availability of power as a result of Norwegian-funded projects has so far only led to a slight increase in business activity. Better access to power has produced little in the way of new entrants. This shows that access to energy is a necessary but not sufficient condition for more business activity. There is reason to consider whether the aid has placed enough emphasis on prioritising development in areas with potential for commercial development.

6.3 Weaknesses in planning capacity development projects cause implementation problems

Capacity building and institutional cooperation are among the most important instruments for bilateral aid to clean energy. In Recommendation No. 269 (2008–2009) to the Storting, the Standing Committee on Foreign Affairs emphasised that it is important to ensure that aid for capacity development is appropriate for stimulating the recipient's ownership of its own development.

The audit shows that in 2000–2013, the core countries signed 27 capacity building agreements with, e.g., the partner countries' ministries, power companies and regulatory authorities. The review of evaluations shows that several projects have seen poor progress and a lack of results.

Several evaluations of the Norwegian institutional cooperation in the energy sector show that the results framework that defines objectives and expected results has been weak and unsuitable for following the progress of cooperation. The evaluations also show that recipient organisations do not give the capacity building projects the necessary priority, either due to a lack of financial resources and staffing or lack of anchoring in the management.

Many of the embassies in the partner countries pointed out the importance of adapting cooperation to the needs of recipient organisations, which requires good background knowledge. Anchoring and ownership require thorough analyses of the organisations' needs and the constraints they work within. Strengthened dialogue in the planning phase can help align the defined objectives and expected results with the recipients' needs to a greater degree, thus increasing the possibilities for achieving lasting results.

6.4 The Ministry of Foreign Affairs' inadequate planning and decision making basis weakens its ability to manage aid effectively

In Recommendation No. 269 (2008–2009) to the Storting, the Standing Committee on Foreign Affairs underlined that development in poor countries requires comprehensive and coherent use of instruments, so that aid is more targeted and strategic.

The embassies' strategic plans and activity plans for 2000–2013 provide information about ongoing Norwegian-supported aid measures, implementation risk and future priorities. The audit shows that the plans specify what is decided, but they include little information about the background for the embassies' decisions and priorities.

The Ministry of Foreign Affairs' 2009 action plan contains no clearly defined goals or a clear timeframe for the initiative. The plan states that the Ministry, in consultation with the embassies, shall specify the recommended guidelines in detailed activity plans that outline goals, projects and expected results, and determine responsibilities and deadlines. The audit shows that embassies do not prepare activity plans for aid. The audit also shows that embassies do not carry out analyses of the energy sector in the core countries as a basis for priorities and decisions concerning development assistance to clean energy. There are thus clear weaknesses in the Ministry's planning and knowledge basis for priorities and decisions. The consequence is that the aid is not very targeted and strategic, and is little adapted to local conditions in the partner country.

The audit also shows that the Ministry of Foreign Affairs has not updated key plans and documents for development assistance to clean energy. The Ministry was to consider the sustainability of the Clean Energy for Development Initiative after two years, update the 2009 action plan annually and conduct a mid-term review of the Action Plan for Environment in Development Cooperation. None of these measures have been implemented to date, giving rise to the risk that the Ministry has a flawed decision-making basis.

Development assistance to clean energy is divided into several channels and among a wide range of recipients. Bilateral aid is distributed among 37 partner countries and multilateral aid is distributed among several organisations, funds and initiatives. The development of clean energy requires high investments to achieve results. Having many different recipients increases the need for monitoring and controls by the Ministry of Foreign Affairs and embassies. The broad distribution of aid and Ministry's inadequate planning weaken the Ministry's ability to manage aid effectively and to choose the means that lead to the achievement of the goals. Overall, this supports a need to concentrate aid on fewer recipients.

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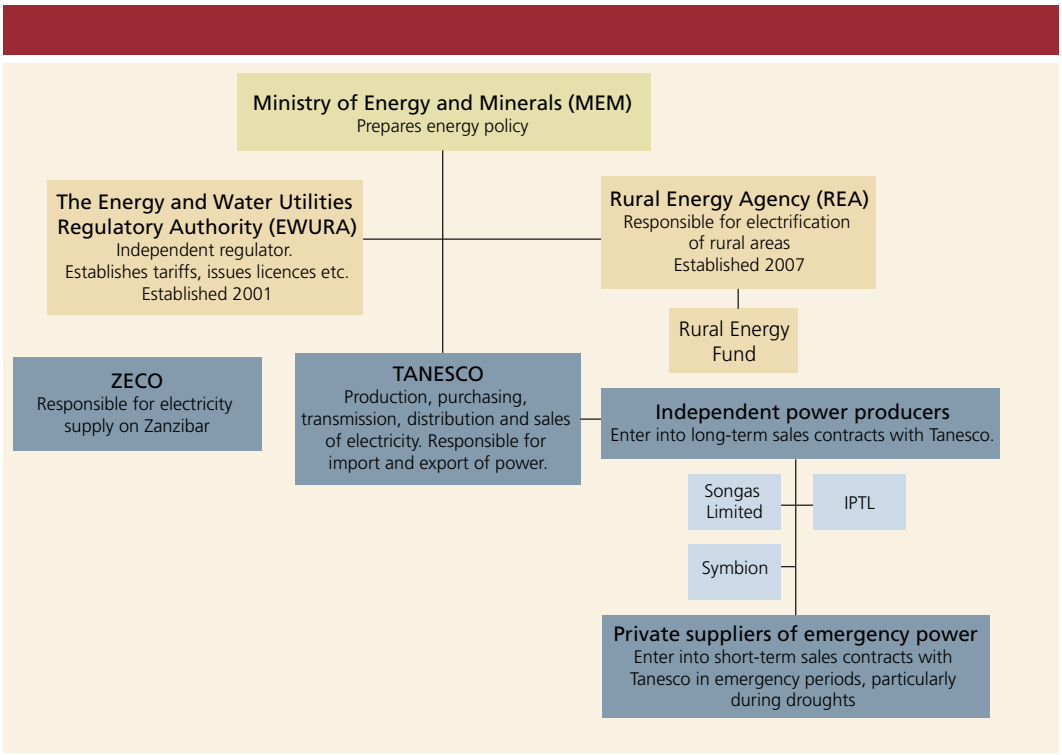
Mosambik	MOZ 0012, MOZ 2016 Rural electrification in Mosambik	Norad (2013) Impact assessment of rural electrification. Final report, Norplan 28.10.2013
Uganda	UGA 08/004 – Institutional cooperation between UETCL and Statnett	Norad (2012) UETCL-Statnett twinning arrangement: End-review of 2009–2011 phase 2 and appraisal of 2012–2016 phase 3 proposal. Final report Norplan 3.4.2012

Annexes

Annex 1 The most important actors in Tanzania's energy sector



Annex 2 Overview of Norwegian-supported capacity building projects in clean energy core countries

Country	Name of the project and agreement number	Partner institution	Year (disbursements in 2000–2012)	Total disbursed in the period (in NOK 1000)
Ethiopia	ETH-07/022 MOWR Feasibility Beko Ako and Mandaya. Contains a capacity building component.	NVE		3 324.3 (at the end of 2011, according to MTR)
Liberia	LBR-09/003 Management contract for the Liberian Electricity Company (LEC), incl. On-the-job-training	Manitoba Hydro International (Canada)	2010–2012	38,993.9
	LBR 09/010 Capacity building at MLME	NVE	2011–2012	28,000
	LBR 09/014 Distribution investment electricity sector. USD 2.3 has been allocated to a separate capacity building programme in LEC	Manitoba Hydro International (Canada)		
Mozam-bique	MOZ-0089 Capacity building to the National Directorate for Energy DNE through institutional coopera-tion. Consists of the MOZ-98/008, MOZ-01/306, MOZ99/326, MOZ-00/308, MOZ 02/350 and MOZ 05/007 projects).	NVE	2000–2007	65,430.8
	MOZ-3009 Capacity building of the Ministry of Energy. Consists of the MOZ-04/280 and MOZ-11/0033 projects)	Unknown	2007–2012	31,953.8
	MOZ 3074 Technical assistance to Electricidade de Mocambique (EDM). Consists of the MOZ-08/004 and MOZ12/0045 projects	Unknown	2008–2012	16,720
	MOZ 3081 CDM Capacity building. Consists of the MOZ-09/032, MOZ-11/0049, MOZ-09/027 projects	–		791
	MOZ-3009 Institutional cooperation between the Ministry of Energy and NVE and strategic advice to Mozambique's energy ministry. Consists of the MOZ-12/0053 and MOS-13/0001 projects	NVE	2012–	
	MOZ-13/0002 Institutional coopera-tion between Electricidade de Mocambique (EDM) and Statnett.	Statnett	2012–	
	Four capacity building programmes at regional level. (SADC, SARDC, SAPP, RERA)			

Country	Name of the project and agreement number	Partner institution	Year (disbursements in 2000–2012)	Total disbursed in the period (in NOK 1000)
Nepal*	NPL-09/005, NPL-09/039 Institutional Development and Cooperation.	SINTEF	2009–2012	7,996.5
	NPL-98/013 and NPL-06/018 HydroLab	Norwegian University of Science and Technology	2000–2012	6,630.2
	NPL-06/040 and NPL-12/0015	Norwegian University of Science and Technology	2009–2010	4,400
	Statnett and NVE have planned institutional cooperation in Nepal since 2009. The NVE project has been shelved by the embassy, while Statnett withdrew from the plans because of a desire to focus on East Africa.			
Tanzania	TAN 07/052 and TAN 07/011 Institutional cooperation TANESCO-Statnett	Statnett	2008–2012	18,088.1
	TAN 09/100 Emergency repair project. Has a capacity building component.	NVE	2009–2012	
	TAN 08/037 Biofuels policy frame-work		2009–2011	6,000
	TAN 10/0035, TAN-10/0070 and TAN-11/0032 Maintenance in ZECO			
Uganda	UGA 3004 UETCL-Statnett twinning. Consists of the UGA-02/025, UGA-06-057, UGA 08/004 and UGA-10/0050 projects	Statnett	2005–2012	33,570.6
	UGA 11/0025 Energy Sector Monitoring Consultant	KPMG	2012–	2,824.2
	UGA 06/048 Strengthening of the State Administration of the Electricity Sector	NVE		2,200
	UGA 04/198 Standard Renewable Energy Development Policy		2005	777
	UGA 99/340 Electricity Regulatory Authority	NVE?	2001–2004	14,274.5
East Timor	TIM-08/012 Institutional coopera-tion within power sector	NVE	2009–2012	24,978.3

Source: Norad's Norwegian Aid Statistics database

* The embassy also informed about several other projects. These are not included in the overview due to the size of the support (below NOK 500 000).

Annex 3 Norfund's investments in upper middle-income countries

Years in which Norfund has invested in the country, are shaded. Red shading indicates that the country has not been within the limit which the Storting has set for where Norfund can invest that year, cf. Proposition 1 S. All investments, with the exception of South Africa, are through SN Power, which according to the Ministry of Foreign Affairs is exempt from the Storting's limit. In a letter, the Ministry of Foreign Affairs stated that assessments of whether a country is within the limit for IDA loans, must be based on the country's GDP per capita the previous year.

Country		2005	2006	2007	2008	2009	2010	2011	2012
Chile	GDP per capita (US$)	7 615	9 371	10 383	10 672	10 120	12 685	14 513	15 452
Peru	GDP per capita (US$)	2 863	3 298	3 795	4 525	4 495	5 386	6 112	6 796
South Africa	GDP per capita (US$)	5 234	5 468	5 930	5 598	5 758	7 266	7 943	7 508
Brazil	GDP per capita (US$)	4 739	5 788	7 194	8 623	8 373	10 978	12 576	11 340
Panama	GDP per capita (US$)	4 594	4 998	5 670	6 473	6 683	7 229	8 373	9 534
Limit for IDA loans		5 185	5 295	5 295	6 055	6 465	6 725	6 885	6 925

Annex 4 Abbreviations in Figure 9

CCS	Carbon capture and storage capacity building
CESUL	Regional Transmission Development Project
EnDev	The Energizing Development Partnership
ESMAP	The Energy Sector Management Assistance Program
GAP-PIDG	Green Africa Power
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GEF	Global Environmental Facility
IDA	International Development Association
NDF	Nordic Development Fund
REEP	The Renewable Energy and Energy Efficiency Partnership
SE4All	Sustainable Energy For All
SEDF	South Asia Enterprise Development Facility
SREP	Scaling-up renewable Energy in low income countries
UNDP	The United Nations Development Programme
UNEP	The United Nations Environment Programme
UN Habitat	The United Nations Human Settlements Programme
UNIDO	The United Nations Industrial Development Organization
WWF	World Wildlife Fund

Background and objectives for the audit.
Findings and recommendations.

241 344
Print: 07 Media 2013

Document 3:12 (2013–2014)

The Office of the Auditor General's investigation of Norwegian development assistance to clean energy

Riksrevisjonen

BACKGROUND AND OBJECTIVE OF THE AUDIT

1.3 billion of the earth's population lack access to electricity and more than 95 per cent of those who lack access to power and other modern energy live in developing countries in Africa and Asia. Helping to improve access by developing renewable energy and power grids is an important goal for Norwegian development assistance.

The objective of the audit has been to assess to what extent Norwegian development assistance to clean energy is in line with the Storting's goal of contributing to economic growth and better living conditions for the poor. The audit mainly comprises the clean energy development assistance provided to the seven core countries: Ethiopia, Liberia, Mozambique, Nepal, Tanzania, Uganda and East Timor. In 2000–2013 they received about NOK 3.9 billion of the NOK 12.26 billion Norway provided for development assistance to clean energy.

Findings and recommendations

Norwegian development assistance has contributed little to increase access to clean energy:

- The aid has led to little increased renewable power generation in the priority partner countries.
- The Ministry of Foreign Affairs lacks sound policy instruments to spur private investments in countries with weak framework conditions.
- Norwegian-supported initiatives for developing power grids have poor economic sustainability.

The development assistance has reached the poorest to a marginal degree:

Over half of the support for the core countries has gone to the expansion of power grids, but the cost of grid connection makes it unattainable for many poor people – the opportunity is used primarily by the richest households.

Rural electrification has only marginally led to more productive activities and economic growth that can benefit the poorest, as intended by the Ministry of Foreign Affairs.

In the Office of the Auditor General's opinion, there is consequently a risk that the goal of reaching the poor will not be attainable for a very long time.

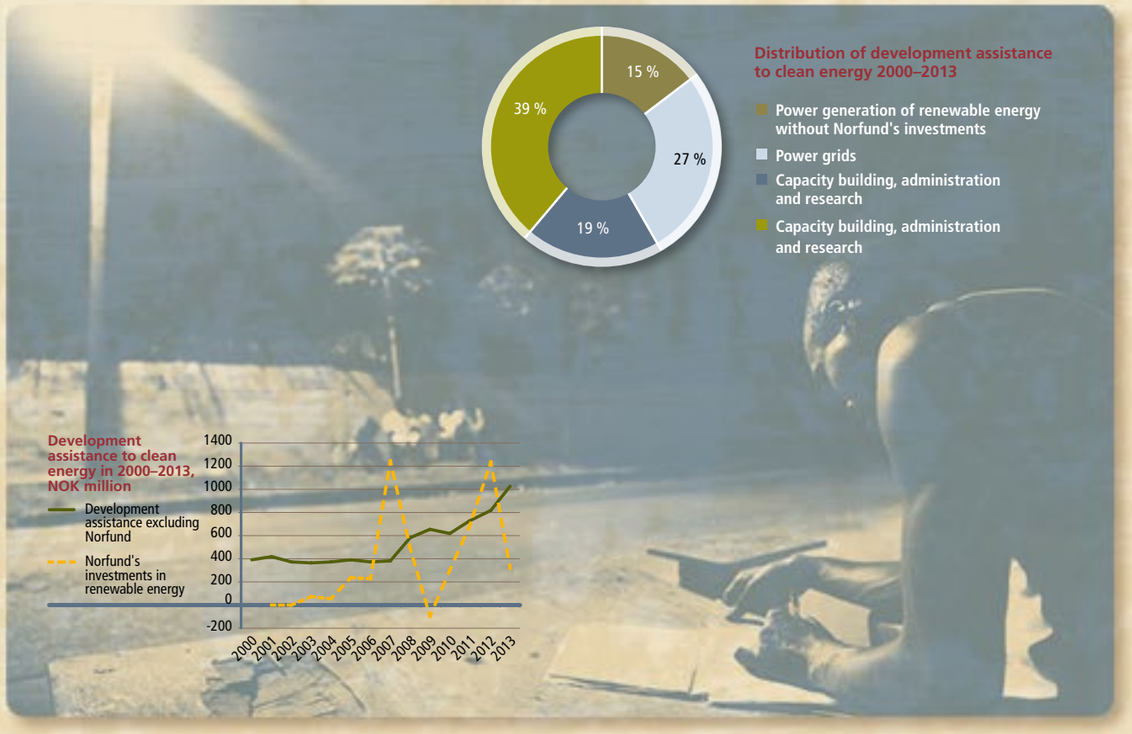
The Office of the Auditor General recommends that the Ministry of Foreign Affairs

- Consider how technological advances in renewable energy could be better utilised to promote increased and more stable power generation in recipient countries and reach the poor segment of the population more efficiently
- Consider alternative measures that can trigger private investments in clean energy in the countries with the weakest framework conditions

Weaknesses in planning capacity building projects cause implementation problems:

A number of the 27 projects implemented in the core countries are marked by sluggish progress and a lack of results. In many recipient institutions, the projects were not anchored in the management and institutions have not had the financial resources and manpower to prioritise projects.

- The Office of the Auditor General recommends that the Ministry of Foreign Affairs ensure that capacity building planning increasingly takes into account the recipient organisation's organisational challenges, capacity and expertise.



The Ministry of Foreign Affairs' inadequate planning and decision-making basis weakens its ability to manage aid effectively:

- The Office of the Auditor General recommends that the Ministry of Foreign Affairs ensures that the embassies implement and improve the analyses as a basis for priorities and decisions concerning development assistance to clean energy. This will provide a decision-making basis that can help ensure that the use of instruments is better adapted to the conditions in the core countries.

Office of the Auditor General of Norway

Riksrevisjonen
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