Evaluation Report 2/2007

Norad

Evaluation of Norwegian Power-related Assistance

Annexes 1–10

ANNEX 1
EVALUATION TERMS OF REFERENCE

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26.9.2006
Jon Teigland,
Norad-EVAL

A1.1 The purpose of the evaluation

Norad's evaluation department (EVAL) will conduct a comprehensive evaluation of earlier development cooperation within the power sector. The evaluation will cover both hydro power generation and distribution of electricity, institutional building and development of capacity and competence.

Development cooperation in the energy sector has been substantial and there is a political decision that this should further increase during the next five years. There is therefore a double purpose of this evaluation; to document and assess past results and performance, and to contribute to quality assurance of future assistance in this sector.

The focus of the evaluation will be on the quality and the more long term results of Norwegian assistance so far and reasons for successes and failures, but it will also reflect two key issues of importance for the future: the potential for improving Norwegian assistance in the future and preconditions for successful assistance in former and new partner countries.

The main users of the evaluation results will be the Norwegian policy makers and the institutions[1] that have been and are involved in developing and implementing Norwegian policy and guidelines for the power assistance. The results will also be useful to partner countries and for other stakeholders in Norway. An important goal is to have the first results ready by early summer 2007 and the final report delivered in August 2007.

A1.2 The background and rationale for the evaluation

In October 2005 a working group appointed by Ministry of Foreign Affairs (MFA) proposed[2] that power related assistance should become a priority sector and that Norway should at least double its power related assistance during the coming years. This vision has been approved both by Minister of International Development and an "action plan" is being developed. This planning process and the fact that power related assistance have not been subject to independent evaluations so far, make it timely to undertake an overall assessment of results and what can be learned from past performance.

The working group proposed that the supply of energy, and especially distribution, should be given priority in Norwegian aid interventions, as these are seen as important and necessary ingredients for poverty reduction. Their proposal was to develop both a broader, deeper and substantially larger Norwegian assistance in the power sector. The outline of such a broader assistance will include an information service for all developing countries that are interested in learning about the Norwegian experiences in the power sector. These information services should be adjusted to the challenges of each country, but be short term and within limited costs.

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[1] Such as Ministry of Foreign Affairs (MFA), Ministry of Energy (MoE), Ministry of Environment (MoE), the Norwegian embassies and the Norwegian Agency for Development Cooperation (Norad), the Norwegian Water Resources and Energy Directorate (NVE), the Norwegian Investment Fund for Developing Countries (Norfund), the Norwegian University of Science and Technology (NTNU)

[2] Forslag til strategi og tiltak for å fremme norsk innsats i kraftsektoren i utviklingsland. Innstilling av arbeidsgruppa nedsatt av Utenriksdepartementet. Oktober 2005.

In addition Norway should give deeper, longer term and comprehensive assistance to a limited number of countries and regions with focus on training of personnel, institutional capacity and competence, legal/technical advice and also financial support to power investments. The working group proposed that power sector programmes should be prioritized interventions in at least three partner countries, in addition to support to regional energy cooperation. Key challenges will be the limited Norwegian capacity for such assistance and the need to secure high quality assistance for partner countries.

However, the evaluation will not be an appraisal of the new "action plan" or its components. It is a fact finding mission with the purpose to learn from earlier projects and programmes by documenting and assessing results and performance, and in that way contributes to quality assurance of Norwegian assistance in the future.

A1.3 The evaluation object and knowledge base

The planning of the evaluation is based on two studies; a statistical study of all Norwegian power related disbursements to developing countries which clarify the evaluation object in general, and a "state of the art study[3] of the long-term results of power assistance more in general and of Scandinavian assistance in special. Appendix 2 includes the executive summary of the state of the art study and appendix 3 some key statistical information.

Norad's database shows that the Norway has been involved in power related assistance for a long period and that the interventions have been very complex with large variation in forms, contents and contexts. Total grants have been more than NOK 10 billion or 1,5 billion US$ during the last 25 years, including projects and programmes in more than 70 countries and to five regional organisations. During the new millennium, annual disbursements were around NOK 400 million or 60 million US$. Only a few of these interventions have been subject to review, and no survey covers this type of Norwegian assistance more in general.

The statistical data base gives information on the volume and content of the Norwegian assistance, but the reliability of the data may vary. Therefore, a task for the evaluation team is to check data quality, especially on what have been delivered and cross-cutting issues as good governance, environment and gender.

The database gives no indications of results or impacts and has not been designed for that purpose. Neither is there information available on how important the Norwegian disbursements are compared to such assistance from other donors. In an international context, the Norwegian assistance has in some countries been significant or major supplement to assistance from the World Bank[4] and/or other multi- or bilateral actors. The evaluation should, therefore, clarify the total assistance to the selected partner countries and role Norwegian assistance has played compared to other donors.

An important purpose of cooperation in the power sector has been to support regional and national economic development in general and the development of industry and trade in special. The assumption has been that increased production and supply of energy would support economic growth and that the economic outcomes later on would "trickle down" and reduces poverty and has other impacts on the standard of living of the inhabitants. The state of the art study shows, however, that reliable information on the results of power related

[3] Stein Hansen. State of the art study. The long-term effects of assistance to the power sector. Final Report September 2006. Norad and Nordic Consulting Group. Copies available on Norad's www……..
[4] The annual energy investments of the World Bank are for example nearly 10 times higher

assistance is weak, including the effects for national, regional and local economic development, on trade and industries, and for the population in general.

The state of the art study indicates that there are important synergies and complementarities between different types of infrastructure. The effects on community level by electrification increase significantly if other critical and interlinked infrastructure is developed as roads and telecommunications. Reports indicate also that energy is a basic necessity on household and enterprise level, while electricity is not. The actual demand, affordability and willingness to pay for electricity by industry and private business (including farming) is poorly mapped and understood. The lack of stable electricity is one of the main barriers to new investments.

The state of the art study states that a major challenge for the coming evaluation is the lack of reliable baseline data and the fact that indicators and monitoring of socio-economic impacts largely are absent. The methods for such data collection and analyses do, however, exist. An important objective for the evaluation should, therefore, be to contribute to a selected sample of baselines for future evaluations and for the introduction of such methods in Norwegian power assistance management.

A1.4 Organization and involvement of relevant interests

The evaluation will be conducted in three phases:

- the preparation phase, including the state-of-the-art study, dialog on Terms of Reference (ToR), the tender process and contracting of a team of independent consultants,
- the implementation phase when the evaluation team conducts the evaluation according to ToR, with the production of an inception report clarifying the work plan, a draft final report and the final report
- the follow-up phase, disseminating and discussing the findings with the stakeholders and giving advice to the Ministry for Foreign Affairs on policy change and how management should respond.

The planning and organising is undertaken by Norad's evaluation department (EVAL). A reference group[5] consisting of major stakeholders in Norway is established. Consultations with the reference group, partner country representatives and other relevant actors in Norway and partner countries will ensure relevance of the Terms of Reference (ToR), the tender process and criteria for selecting the evaluation team. The reference group will be invited to give their comments before the inception report is approved by EVAL.

The draft final report will be sent by EVAL to partner countries representatives, the involved Norwegian embassies, the reference group and other involved stakeholders, giving them the opportunity to comment on the findings, conclusions, recommendations and lessons learned which are presented in the draft report. The final evaluation report will reflect and assess these comments, and acknowledge any substantive disagreements. The reference group will, together with other stakeholders, also be invited to participate during the follow-up phase in discussions about the conclusions and recommendations in the final report.

An evaluation team, independent of the stakeholders and EVAL, will be selected after an international tender process and is responsible for the findings, assessments, conclusions and recommendations in their reports.

[5] A list of the members is included in appendix I.

EVAL has professional responsibility for the evaluation process and choice of consultants. EVAL is also responsible for its independent advice to the Norwegian Minister for international development on policy change and management response.

A1.5 The objectives and key evaluation questions

The evaluation will be conducted according to MFAs instruction for Norad's evaluation department. It will follow the norms and quality standards laid down in OECD/DACs evaluation guidelines[6] and cover all of DACs criteria for evaluating development assistance; relevance, impact, effectiveness, efficiency and sustainability.

The evaluation has three broad objectives;

- document and assess the results of the Norwegian power related assistance
- assess the content and quality of the Norwegian assistance and how it may be improved
- collect information from a selected sample of projects and programmes which can constitute a baseline for measuring results of key elements in the new "action plan".

It will not be possible to cover all aspects of the three objectives mentioned above. It has, therefore, been necessary to limit the scope to the following less broad evaluation questions. The evaluation team should investigate and assess these key questions, and present the findings, conclusions, recommendations and lessons learned in the draft and final report.

The evaluation team is, however, free to propose additional or reformulated evaluation questions or changes in design/methods in its tender documents and the inception report.

A1.5.1 The results of Norwegian assistance

Norwegian power related assistance covers interventions where Norway alone or in cooperation with other donors plan and/or implement interventions. The main and broad objective is to document and assess to what extent Norwegian power related assistance:

- produced the anticipated results
- identify successes and challenges,
- clarify reasons for why interventions have been successful or not, and
- lessons learned by Norway and partner countries/institutions.

The state of the art study shows that there is surprisingly little documentation of effects for industry/trade, for local communities and for households, but also for economic development more in general on national and on regional level. The evaluation should give priority to such assessment, but results are a broader concept which covers observed changes in relation to key indicators, anticipating as well unexpected changes, short- and long-term effects of the assistance and cause-effect relationships. An important instrument for assessing change and results is in many cases attempts to "reconstruct the situation" before or during an intervention.

The key results related evaluation questions are:

i. What have been the results of Norwegian assistance to the partner country/ region, its power sector, institutions and participating staff and when applicable to local communities, industries and households?

The result assessments should in particular include the effects of technical and financial assistance in production and transmission/distribution of power on the development of

[6] Including the guidelines in DAC Evaluation Quality Standards, March 2006

industry and trade on local, national or regional level in special, including effects related to import/export of energy.

In addition to the effects on economic development and poverty reduction the result analysis should at minimum cover capacity/competence building effects for institutions and individuals and effects on resource and environmental management, including the cost-effectiveness. Assessments of institutional development and capacity should preferably be in accordance with EU's or equivalent guidelines[7].

Since the solution of the power crisis in southern Africa partly can be a more extensive regional cooperation, a limited part of the evaluation should be the results of the Norwegian assistance in the developing and implementing *regional frameworks* like the power cooperation through Southern African Development Community (SADC) and Southern African Power Pool (SAPP).

ii. What have been the reasons for success or failures, and the risks involved?

Power developments are most often long-term interventions with long lag time between inputs and results. The assessments should therefore cover the full period from the planning of an intervention and up to the end of 2006, giving priority to reasons or result chains for long term effects, assessments of sustainability and lessons learned.

Changes that take place over time can be related to other factors than the intervention which are studied. The evaluation team should check if other factors or processes than the Norwegian assistance may have influenced the results, including changes in partner countries policies, institutional arrangements, economic situation and ability to absorb assistance.

Assessments should cover the importance of external risks that were not easy to control or not under the control of the partners involved. The team should identify internal risks which have influenced the results and performance of Norwegian power assistance so far and how threats/risks were analysed, monitored, reported and reacted to by the responsible units. The response of Norwegian authorities and of partners to weaknesses and potential improvements that are reported in reviews, progress reports or other documents are of special interest.

iii. What have been the challenges and opportunities for Norwegian assistance when other donors or commercial interests have been involved directly or indirectly

The Norwegian power related assistance has most often been implemented in countries where other donors and the private sector have been involved at the same time and/or in the same area. In some cases private Norwegian stakeholders been involved together with Norwegian public interests or different public institutions have been partners. The results of such interactions processes should be covered by the evaluation with focus on how the results have been influenced by processes as harmonization and privatization.

iv. What have been the results for Norwegian Stakeholders?

The evaluation should also analyse the results for the Norwegian stakeholders and cover not only the Norwegian institutions directly involved in the partnerships, but clarify the economic linkages to institutions, companies or individual consultants in other steps in the results-chain.

A1.5.2 The quality assessments

With future assistance in mind, the evaluation should assess how the cooperation and results can be improved, with focus on measures under the control of Norway and partner countries/institutions.

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[7] European Commission. Europe Aid. September 2005. Institutional Assessment and capacity Development. Why, what and how? See also guidelines from Danida or DiFD

The second broad objective is, therefore, to identify strong and weak elements in the design of Norway's assistance and the planning/implementation instruments provided by the Norwegian and partner institutions.

The key quality related evaluation questions are:

i. What has been the content of Norwegian power related assistance (the input)?
The evaluation should give a clear description of the Norwegian intervention, including the time pattern, influence area, objectives, volume of input, content, actors and context, including cooperation with other donors and relationships to other relevant interventions taking place in the same geographical area (the total power related assistance and other relevant infrastructure projects/programmes).

ii. How has the quality of the Norwegian input been, when assessed according to DAC's evaluation criteria (relevance, effectiveness, efficiency, sustainability and impacts?

Assessments of contents and quality should be based on the guidelines which were relevant at the time of the Norwegian assistance; including framework/sector agreements, contract obligations and ToR, in addition to quality or normative standards for the power industry/trade, and policy documents by Norwegian and partner country authorities.

Key guidelines for the Norwegian power related assistance has been the Norwegian 1994-policy for power development and international norms for tender processes as the guidelines from the International Federation of Consulting Engineers (FIDIC).

The quality assessments of Norwegian partner institutions should focus on the effectiveness, efficiency and capacity of the institutions, but also include the competence of their staff and partners in development assistance, transfer of knowledge, language and cultural skills. This will apply to capacity/competence/quality of assistance of the different Norwegian partners and subcontractors or non-governmental organizations (NGOs) as well as Norad, MFA and the involved embassy. In other words: How cost-effective has their assistance been and to what degree have they reached the expected goal stated in agreements and annual plans/budgets? How has the quality of programme design and planning affected implementation and result? How do the institutions in the south assess the results and costs of twinning arrangements compared to other types of assistance?

The assessment of relevance should cover the appropriateness and relevance of Norwegian role/management models and instruments/measures to the situation in partner countries. These models include Norwegian ways of organising the responsibility for policy development and implementation (law, regulations, licensing and reforms) and the way of organising technical assistance either as twinning arrangements between institutions or hiring consultants for more focused "task-assistance". The instrument concepts include such tools as:

- programme assistance planning
- development of master plans,
- assessments of partner needs (including training needs),
- competence building and training, including higher education and research both in Norway and partner countries
- environmental/social impact assessments (when relevant)), and quality/performance control.

Quality/performance control refers to tools used before a programme is entered into by Norad or agreement partners, appraisals by resource persons, and tools such as monitoring, reviews and evaluations. The effects of appraisals, monitoring and reviews on implementation should also be clarified to see if recommendations have been included in projects afterwards.

iii. What has been the value added or comparative advantage of Norwegian power related assistance?

It is important to clarify the possible comparative advantages of Norwegian assistance has had, by getting the partner countries assessment of the strong and week aspects of the assistance compared to their experience with other donors or partners.

iv. How and to what degree has the assistance covered cross-cutting issues?

The evaluation should also clarify to what degree cross-cutting issues such as health and HIV/Aids, safety, environmental protection, good governance, gender and capacity building/training issues have been covered in the cooperation. The cross-cutting realities should be checked by comparing information from resource persons with existing data sources including Norad's statistical database, reviews and reports from the involved embassies. The purpose is to assess the quality of existing information tools.

A1.5.3 Selected baseline for future evaluations

The third objective of the evaluation is to contribute to a baseline for future assessments of the performance and effects of the new "action plan" and other current programmes or projects. The aim is to get a baseline from the beginning of the new "action plan" which covers key results before the implementation of the new "action plan", the existing quality of the Norwegian input, the performance of involved partners, and the context of the assistance.

This baseline information should be limited to key elements in proposed new "action plan" and include data collected by at least one case-study of:

- the total power related assistance to one partner country where Norway have power sector programme with comprehensive and long term assistance
- an intervention which focus on distribution and electrification of rural and urban area
- an example of twinning arrangement for building institutional competence and capacity
- an example of financial support to power investments

A1.6 Strategy, methodology and data sources

The evaluation in general is based on a case-study design which covers two of Norway's partner countries and a limited study of the results on SADC and SAPPs framework for regional cooperation by the Norwegian assistance. It will build on information produced by earlier reviews, appraisals or study reports, but use such second-hand accounts as a starting point for analysis of first-hand empirical material which gives a deeper or broader understanding.

The two partner countries chosen for in-depth case studies are Mozambique and Nepal which did receive NOK 2 billion and 356 million respectively in power related assistance 1980-2004. The comprehensive and long lasting Norwegian programmes in these two countries, and the fact that both countries have energy sector programmes, are important reasons why they have been chosen for studies of the results of the assistance.

The cooperation with Mozambique includes nearly all elements of power assistance from institutional capacity/competence building to, energy production/ transmission/-distribution and a variety of planning and implementation instruments. Additional arguments for choosing Mozambique are:

- that country is partner in the regional power cooperation in SADC and SAPP,
- the possibility for synergy effects with the ongoing evaluation of the Norwegian petroleum assistance and

- the possibility for using existing socio-economic data collected by the national statistical office (INE) for evaluating the results of case-projects on provincial level.

An in-depth case study in Mozambique should include the quality of Norwegian assistance, the relationships with partners, challenges related to harmonization, the effectiveness of different instruments, and the intended and real results for the stakeholders on country and local level and in Norway.

This in-depth study should cover Norwegian assistance from its start and up to 2007, but with emphasis on the period after 1992. The focus should be on long-term effects (more than 5 years), but also cover recent short term effects of strategic importance. Of special interest on national level will be the results of the long lasting institutional cooperation, lessons learned from the introduction of sector plans and harmonization with other donors, and from extensive planning of new production and transmission capacity. Results for industry/trade and households on provincial/local level from old and more recent production, transmission and distributions facilities, including poverty reduction by rural electrification and small/old production units, will also be key issues. Documentation of the power needs of enterprises and households[8], and the factors influencing such demand on provincial/local level will be important. An in-depth case study of the results of the old power project in Cuamba and new electrification projects in Gurue in the northern provinces are relevant, but the evaluation team is free to propose alternatives in its tender documents and inception report.

Results from the case study in Mozambique will be compared to and supplemented by the in-depth case study in Nepal, looking for general patterns or dissimilarities in the results and the quality of Norwegian assistance[9]. The choice of Nepal as the second case-study country is based on the need to cover experiences from a country where the volume and scope of Norwegian assistance has been different, and where the context is different.

The data collection in Nepal should cover all major types of assistance on national level and the whole period Norway has been involved, with emphasis on the short and long term results by actions of NGOs, commercial actors and the Norwegian public institutions which have been involved. Two special case studies should cover the development effects for local communities and poverty reduction among households, and by developing small scale production units and other types of non-renewable energy facilities and institutional arrangements. Data on the local needs for energy should also be collected as in the case studies in Mozambique. The data collection should include comparison with communities without power supply. The main case study covering local level should be the interventions related to a Norwegian NGO (United Mission to Nepal or UMN) and Butwal Power Company (BPC). The effects on the local community and other stakeholders by privatization of BPC should be identified. The evaluation team should feel free to propose an additional intervention for a case-study on local level in Nepal.

In addition to the comparisons between field-data and existing documents from Mozambique and Nepal, the team should use information published in the state-of- the-art report, a new review of the power assistance to Uganda, the results of a coming review from Angola and

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[8] Ref. the new World Bank Methods for collecting data on the energy use and needs among households

[9] The evaluation design is in other words a "multiple case study design with embedded multiple units of analysis"[9] as described for example in Yin, R. K. 1984. Case Study Research. Design and Methods. Sage publications. London. The Norwegian power assistance programmes in a few selected countries will be "the multiple cases" and the units of analysis are the results, quality of inputs and relationships (the key evaluation questions). The main method is to compare – when possible - how the analytical unit(s) varies between chosen cases (countries and interventions) and contexts, looking for similarities and diversity.

other documents to look for generalization possibilities[10] . The generalization possibilities will be enhanced by impact studies of rural electrification which World Bank will do in the near future.

It should be possible to collect information on the content and quality of Norwegian assistance by interviewing resource personnel in the Norwegian institutions and agencies who have been involved in the chosen case-study countries and by analysing existing documents and accounting data. These data sources should also give reliable information on results for the involved Norwegian stakeholders, either directly involved or indirectly through other steps in the result-chain. It will be important to compare the Norwegian actor's self-assessment with quality assessments by partner institutions, their staff and other relevant actors inside the power sector or in related institutions.

Information about the results in partner countries/ institutions and other donors should be available from the same type of resources; by interviewing people on all staff levels and units in the partner institutions, and through data produced by them, including accounting data. The limited study of the framework for regional cooperation through SADC and SAPP should be based on similar types of data sources.

Assessments of results on institutional level should, however, first clarify the products and services that the partner institutions have delivered by collecting information from the users of such products and services, both inside and outside of the power sector (for example from other ministries and the private sector). Data on long and short term effects of competence building and training should be collected by interviewing the participants who have had training in Norway and on courses/job-training in partner countries. The training data should include previous staff members who have changed jobs. Data collection in partner countries is a demanding task and requires competent local consultants.

It is necessary for the evaluation team to use triangulation strategies and check the reliability of information by comparing data from different sources. The comprehensive studies in Mozambique and Nepal should include comparable personal interviews of the staff that cover all levels and units in partner institutions. These field studies should present an overview of all actors involved directly in the partnerships, but also other actors who have been participating/hired in additional steps of the result-chain including institutions, companies and individual consultants in Norway and partner countries.

The consultants should, in their tender document and inception report, clarify the analytical tools and data collection methods they intend to use for the assessment of results and performances. The quality of design, analytical framework and data collection methodology proposed by the consultants in their tender will be one of the criteria for selecting the evaluation team.

A1.7 Reporting

The consultants will according to the preliminary time schedule present an inception report within 6 weeks after the contract is signed giving a more detailed plan for the work tasks. This report should clarify the analytical framework, the main hypothesis and the fact finding tasks which the evaluation will investigate, data sources and indicators. The indicators should be as specific, measurable, attainable, relevant and time bound (SMART) as possible. The

[10] Supplementary information on some results from Norwegian power assistance will also be found in an evaluation of Norad Fellowship Programme from Tanzania and Bangladesh, see Norad 2005. Evaluation of the Norad Fellowship Programme. Evaluation Report 1/2005. Oslo.

inception report will be based on desk review of documents; interviews with key resource people and include a preliminary discussion of the intervention logic and the assumptions which the interventions were based on.

The field studies will end with a debriefing of the authorities in partner countries, the Norwegian Embassy and other involved partners before leaving the case-study country and with a debriefing of Norad and relevant stakeholders at a meeting in Norway.

A draft final report will be delivered in electronic form in June 2007 for feedback from EVAL, the reference group and other stakeholders. The feedback includes comments on facts, conclusions, recommendations and lessons learned. The consultants should reflect comments and acknowledge any substantive disagreements in the final report.

The final evaluation report is to be submitted to EVAL by August 25th 07 by the Team Leader. It shall be an analytical report written in English not exceeding 60 pages (excluding annexes), detailing the findings, conclusions and recommendations on planning and implementation for Norwegian power assistance in the coming years. The structure of the report should facilitate assessments of the key evaluation questions. Annexes should give more detailed information on Norwegian assistance to each case-study country; the assistance, context, results, quality, relationships and methods used in the evaluation. The final report shall be delivered both in electronic and paper form in accordance with EVAL's guidelines, and the language checked.

The final report will be followed-up by meetings/workshops where the consultants will participate in discussions with the parties involved, other stakeholders and with EVAL. The follow-up phase for the consultants will be limited to 15 man days during the 6 weeks after the final report has been delivered.

A1.8 The tender process and choice of evaluation team

The tender process will be international and in accordance with EU rules. The main competition criteria will be the quality of team, the design and methods proposed, the availability of team members and price. The team needs a high level of competence in the main issues in power assistance, including legal and technical assistance, environment/health/security and income management, but also education and training. The team leader should have extensive experience of major evaluations. The selection criteria will be defined in the invitation for tender. The invitation for tender will also include the expected time scale for the evaluation.

Appendix 1: The Power evaluation; the members of reference group

A. The Ministries

Eikeland Else, Berit. Seniorrådgiver. Utenriksdepartementet (UD): Regionavdelingen, Seksjon for Utviklingspolitikk. ebe@mfa.no, tlf. 22243403.
Postboks 8114 Dep. N-0032 OSLO

Johansen, Jan Øivind. Underdirektør, Olje og Energidepartementet (OED), Avdeling for teknologi og internasjonalisering. oivind.johansen@oed.dep no
Tlf. 222 46218 Postboks 8148 Dep 0033 Oslo

Larsen, Thrond Berge. Rådgiver. Miljødepartementet. thrond.berge.larsen@md.dep no
Tlf. 224 45816. Postboks. 8013 Dep. 0030 Oslo

B. Implementation actors: - Public sector

Løkke, Kristian. Sjefsingeniør. NVE. Konsesjons- og tilsynsavdelingen. kloe@nve no
Tlf: 22 959595. POBox 5091 Majorstua, 0301 Oslo, Norway

Støle, Haakon. Professor. NTNU, Institutt for vann- og miljøteknikk. Haakon.stole@ntnu no
Tlf. 47 73594749. NTNU, 7491 Trondheim

Stenstadvoll, Einar. SN Power Invest. Einar.stenstadvoll@snpowerinvest.com
Tlf: 47 2406 8645, mobil: 95830620. POBox. 200 Lilleaker, N-0216 Oslo

C. Implementation actors: - Private sector

Lindemark, Jan. Multiconsult. Jan.lindemark@multiconsult.no and jan.lindemark@norplan.com Tlf: 64855520 PB 280, 1401 Ski

Kronen, Terje: ForUM for utvikling og miljø. tk@forumfor.no
Tlf: 2301327, Mob. 97514683, Storgata 11, 0155 Oslo

D. The Norwegian Agency for development Cooperation

Glømmi, Øistein. Senior rådgiver. Norad. avdeling for miljø og næringsutvikling (MN) gruppe for Infrastruktur. oeg@norad no og oglommi@yahoo.no
tlf Norad 222 40239. Pb. 8034 Dep. 0030 Oslo

Sneve, Tor Morten. Norad. Seniorrådgiver. Avdeling for miljø og næringsutvikling (MN) gruppe for Infrastruktur. tom@norad no Tlf. 222 40213.
Pb. 8034 Dep. 0030 Oslo

Responsible in Norad's Evaluation department:

Jon Teigland, Seniorrådgiver. Norad. Evalueringsavdelingen. jot@norad.no. Tlf. 222 40216
Pb. 8034 Dep. 0030 Oslo

Appendix 2: The state of the art study: the executive summary

Poverty reduction has not been a key direct goal of Norway's power sector aid.

During the past 25 years Norway has granted more than NOK 10 billion to power sector aid. However, relatively little is known regarding the effects and impacts of this aid. Poverty reduction is and has been the overarching goal for Norwegian and international development cooperation in general. However, it has not been reflected as a key direct goal of Norwegian power sector development cooperation.

Promotion of Norwegian interests have been central to Norway's power sector aid. Norway's power sector aid has focused on promoting investments in power sector infrastructure and supporting technical assistance to transfer technological and institutional knowledge needed for the capital intensive power sector investments to enhance national economic growth and contribute to modernization of societies. For this purpose, tied aid, which Norway has strived to abolish among donor countries, was retained as practice for significant parts of Norwegian power and energy sector aid cooperation contrary to Norwegian aid policy and which has likely led to lower aid efficiency and effectiveness.

Macro-economic impacts of infrastructure and power sector development.

Countries with more developed infrastructure see a disproportionately greater impact of infrastructure on foreign direct investments (FDI) and domestic investments, and on growth. At the same time, countries with lower, underdeveloped infrastructure see no such growth impact. In other words, not only can a lack of infrastructure be an impediment to more investment, but it can also be one of the dimensions of the so-called poverty trap whereby a critical mass of infrastructure is needed to convince investors to make the decisions leading to sustained growth. This suggests that there are critical and interlinked infrastructure threshold levels that have to be reached before one can trace a growth and poverty reduction impact of infrastructure investments. Most African countries have yet to reach such infrastructure threshold levels

In places where the lack of power supply is identified as a key impediment to growth and removal of key obstacles to poverty reduction, the Norwegian broad-based power sector aid strategy may therefore be highly relevant and effective. At the same time, it must acknowledged that the countries Norway has selected as targets for such aid, belong to the most difficult ones in terms of achieving successful macro-economic development conditions for sustained growth and poverty reduction by means of relying on "trickle down" effects that such power sector aid entails.

Complementarity between different types of infrastructure.

There are important synergies and complementarities between different types of infrastructure. The partial contribution of electricity connections to growth and poverty reduction is enhanced if all year reliable roads are provided, and further enhancement is achieved if reliable telecommunications are in place. Welfare effects of access to multiple forms of infrastructure are thus greater than the sum of effects for each type of infrastructure individually.

Myths and realities as regards power sector impacts on livelihoods.

While energy is a basic necessity, electricity is not, as documented by the priorities set by both enterprises and poor households in developing countries. The often claimed health and education benefits from provision of electricity to clinics and schools are by and large exaggerated. Energy is a relatively minor input into the production of health and education

services and there exist close substitutes to electricity that will secure an adequate level of such services.

Women are key beneficiaries of the change in living and working conditions provided for by electrification. Many of their chores are very time consuming as a result of not having electricity access, and in addition, having electric power extends their daylight and provides for increased literacy, better income earning opportunities, and they become more independent and have a more of a say in household economic matters.

Available household survey results for Africa suggest that:

> Users who are connected to a network do not have a major affordability problem,

> users who are not connected often do have a major affordability problem,

> the majority of the population is not connected to a utilities network,

> in rural areas, very few are connected,

> the population not connected tends to be among the poorest income groups, facing an affordability problem for utility services,

> in Africa the idea of relying on private operators concerned with full cost recovery without any subsidy component would be incompatible with network coverage expansion efforts.

Worldwide experience suggests that electricity for the poor require cross-subsidies between user groups preferably supplemented with extra-budgetary funding to provide connections at affordable costs to the poor. Where poor non-connected households are a large majority such cross-subsidization may be inadequate for financing access and use of the poor.

Connection fees tend to be much more critical for affordability than kWh tariffs since the poor tend to use very little electricity once they are connected.

The role of reliable power supply for business and enterprise development.

Lack of reliable and stable electrical power is one of the most important barriers to investment in new and productivity enhancing technology and machinery. Many African establishments have invested in own sources of power supply (e.g. diesel generators for back up) even if they are supplied by the public grid. This adds to the costs of operation. Outages and the risks associated with outages makes export oriented enterprises particularly vulnerable and the expected sales losses due to such unreliable power supplies can often be the factor that tips an investor's decision to a more reliable location. Reliable power supply is thus an important investor attractor and a growth enhancing and a poverty reducing factor.

The importance of involving stakeholders in reform processes.

Crucial to the success of such reforms is involvement of key stakeholders in the reform process and to allow whatever time is needed for local reform ownership to establish before its implementation. It is important to have an independent regulator in place before the commercialization of the utility is initiated so that good governance, transparency and whatever social considerations in the Poverty Reduction Strategy or other key policy documents can be properly adhered to when implementing the energy policy. Reform experience show that with a good reform process in place, ownership (private or public) of the power producer is not decisive for outcome, but autonomy to operate on commercial terms is. However, getting active private owners "on board" can sometimes revitalize the utility and enhance efficiency beyond what a commercial public operator can achieve.

Why sector reforms risk failure.

Donor driven technical assistance in relation to electricity sector reforms risk costly failure when attempting to transfer rich country "best sector organization practice" onto poor developing countries with vastly different market, institutional and cultural settings. Independent reviews undertaken for a.o. the Asian Development Bank confirm this risk.

Experience with Norwegian "twinning" arrangements for technical assistance.

Independent reviews and evaluations of such "twinning" experience in Namibia, Nepal, Palestine, Mozambique and Uganda have established that these often fail in important respects due to:

> the supply-driven nature of reforms when done in a "twinning" context,

> resistance to change of status quo in many Southern institutions,

> the cultural- and communications barriers between foreign advisors and consultants on the one hand, and local management and staff, on the other,

> cost-inefficient set-up and implementation caused by lack of an open competitive process for selecting the best qualified supplier of such assistance,

> lack of performance monitoring indicators,

> poor and uninformative reporting and information on progress and problems, as well as financial statements

Such a critical focus is required even where "twinning" arrangements that Norway has entered into with poor partner countries have resulted in progress in areas of developing new legislation and regulation, concessions, procurement, and negotiating agreements with independent power producers, as well as training and capacity building of the local sister institution. Modern power sector legislation and regulation is now in place in many countries, but implementation and enforcement appear to lag far behind.

Norwegian support for training of local power sector staff has been a success.

A clear conclusion from this review is that training and capacity building – whether done in the form of on-the-site training, by sending counterpart staff for training at a Norwegian workplace of relevance, by enrolling local staff as students in a fellowship program, or providing for their participation in e.g. the international hydropower courses at the International Center for Hydropower – is overall positive.

Environment considerations continue to be donor driven conditionalities.

The recent World Bank Group evaluation of it's experience with private participation in the electricity sector during the 1990s concluded that <u>there is huge untapped power sector potential</u> for progressing beyond "*doing no harm*" to "*doing good*" on environment issues. For the most part, Environment Impact Assessments (EIAs) were not implemented and institutionalized in response to a widespread indigenous demand for better environmental management and protection, but instead they were donor driven and accepted by the recipients due to the donor conditionalities that such EIAs be produced. Lack of political will and vision is undoubtedly the biggest obstacle to making EIA effective in developing countries. There is insufficient political priority accorded to the environment in general, and EIA in particular. This lack of political will is unfortunately also allied to widespread greed-based corruption.

A serious lack of relevant indicators needed for impact monitoring and reporting in development cooperation characterizes Norwegian power sector projects.

This State of the Art Review has identified *a serious lack of monitoring and reporting of development-relevant impacts related to Norwegian and Nordic power sector projects.* One cannot exclude the possibility that this reflects a lack of basic understanding or plain ignorance of the key linkages between power sector development and the key dimensions of development more generally which development assistance is meant to promote.

In spite of the huge amounts of Norwegian and Nordic aid spent, the contribution of the power sector development assistance to economic and social development and poverty reduction is still unclear because good tracking of development and distributional impacts is rarely provided for in electrification studies.

Unlike the leading multilateral development banks that have developed methods focused on quantifying impacts and effectiveness of projects and institutional reforms, "with-without" or "before versus after" documentation has in most of the Norwegian institution building- and power project development assistance not been a key issue on the agenda. Proper baselines have either not been established at all, or the baseline information has been limited to direct effects often measured in the form of inputs rather than outcomes. Indirect- or multiplier effects of the investment/technical assistance in institution building is hardly ever attempted estimated in any systematic and structured way.

When appraising and assessing power sector development as a means to enhance the investment climate for business development, modernization and reduction of poverty, one has to distinguish between the impacts of:

> distribution network expansion,

> providing connections to poor households (roles of tenure and access to credit),

> what the electricity can be used for (new and existing work-related tasks, household-related tasks),

> the delivery terms (tariff level and –structure)

Experience worldwide reviewed in this report suggests that the growth and poverty reduction impacts of power supply expansion depend on:

> the income profile among affected stakeholders,

> simultaneous investments and upgrading of complementary infrastructures, which mutually enhances each others' performance and returns,

> well functioning institutions and regulatory authorities

> access to credit among the poor,

> sustained adequate maintenance practices

Challenges for the full power sector evaluation.

The full evaluation of Norwegian power sector aid should explicitly address these issues. As regards Norwegian – as well as Nordic – funded power projects in developing countries, the above lack of such relevant data and application of analytic methods for assessing net impacts is the rule and not the exception.

Future project- and policy preparation and design should take such considerations explicitly into account and make sure the cooperation contract has the resources available to secure proper and continuous monitoring so that the activity stays on the right track until completed.

A large share of the uncertainty surrounding the impacts of power- and other infrastructure projects and programs can be traced to the inadequacy of the available information about even the most basic social and environmental impacts. The data and indicators required to monitor them should be addressed at the pre-feasibility stage, when the various alternatives to be compared are identified.

Related to this is of course the (lack of) capacity and commitment of the recipient to cooperate to collect and monitor such comprehensive sets of data and indicators over an extended time period so as to make it possible to measure even long term impacts. The full evaluation will need to look into to what extent such capacity and commitment in fact has been adequately addressed when deciding the amount of complementary technical assistance for recipient institution capacity building to enable it to implement the project/program as designed and so that it's impacts can be traced and measured.

In all fairness, the Norwegian power sector aid cooperation should be evaluated against those guidelines and directives that were ruling the scenes at that the time projects and programs were initiated and implemented, and not against those that have been introduced after the aid agreements went into effect. The last two decades have displayed an awakening awareness and acceptance of the economy-wide effects and impacts of infrastructure projects and sector reforms. A consequence of this has been a steady development in how the project and program-specific social- and environmental effects shall be reflected in designs, appraisals and evaluations.

Appendix 3: The Norwegian power related assistance; key statistics

Norad's statistical database gives only an overview of the Norwegian input to the power sector, but no indications of the results. Total grants during the last 25 year has been more than NOK 10 billion or 1,5 billion US$ on power related aid in developing countries. Such Norwegian assistance has so fare been provided in 70 developing countries and to five regional organisations through a large number of projects and programmes. The assistance has varied over time, with a peak early in the 1990'ies with NOK 6-700 million annually. During the new millennium, annual disbursements were around NOK 400 million or 60 million US$.

Regional and national economic development in general have been important reasons for power related aid since 1980, and in special the development of industry and trade. More than 40% of the total disbursements 1980-2004 were based on budget lines with such purposes. But only 0, 1% was linked directly to industrial development and not more that 0, 7% relates to commercial services.

Nearly all Norwegian power related assistance has been bilateral and organised as aid directly to partner countries. Only a minor part has been multi-bilateral through regional organisations. Southern African Development Community (SADC) was the main regional partner receiving NOK 400 million or 4% of the total.

Most of the power related aid has been concentrated geographically with nearly 70% of total budget used in only 11 countries. 63% of the total was allocated to Africa, with Mozambique and Tanzania as the largest recipients. These two countries received during 1980 and 2004 more than 35% of the country specific allocations in general and 2/3 of all allocations to African countries, with NOK 2 billion to Mozambique and 1, 7 billion to Tanzania. Three other African countries; Uganda, Zambia and Namibia have also received relatively extensive bilateral assistance; NOK 525, 400 and 315 million respectively, not including aid through regional channels as SADC. But disbursements to Mozambique and Tanzania were 4-5-6 times higher.

21% of the total budget was allocated to Asia with Bangladesh, Nepal, China and Pakistan as the four main partner countries received 60% of disbursements to Asia. The level of this type of aid to each of these countries was comparable to what Zambia and Namibia have received. The total power related aid to Latin America was less than each of these 6 African and Asia countries have received.

Planning and development of transmission and distribution has been the main purpose more recently with 59% of total disbursements during 1999-2004. Development of energy policy and administrative planning has been another important recent task with 17% of budgets. Power plant construction only received 13% of the total. Allocations for alternative energy as solar and wind power have been minimal. These data indicate that only 1, 5% of the total budget was used on education and training the last 6 years. During 70's and 80's investment in energy generation was substantial.

Environmental purposes were a significant or the main objective for 10% of the budget allocations, but only 1% of the disbursements had environment as the main objective. Good governance has only indirectly been the purpose. Resource persons assess that good governance, environmental issues and training have had higher priority than Norad's database indicates, a question the evaluation should verify.

A large number of Norwegian institutions and management units have been involved in this type of development cooperation, which partly reflects the reorganisation of Norwegian

assistance system in general with responsibility moved from Norad to the Ministry of Foreign Affairs and the embassies in 2004. In total more than 150 different partners have been involved during the last 6 years. Partners in developing countries received 78% of the total disbursements 1999-2004. Nearly 60% of the disbursements to partners in developing countries were to national political authorities, as ministries.

Norwegian partners were directly responsible for reporting and implementing approx. 15% of the total budget, but indirectly most probably more since disbursements to partners in developing countries later on have been used to pay for Norwegian products and services. NOK 250 million was contracted directly with Norwegian consulting companies, which represents 2/3 of total disbursements to Norwegian partners or 19% of the total assistance 1999-2004. The evaluation should clarify how much of Norwegian disbursements in reality go back to Norwegian interests.

Norad
Norwegian Agency for
Development Cooperation

P.O. Box 8034 Dep, NO-0030 OSLO
Visiting adress:
Ruseløkkveien 26, Oslo, Norway

Telephone: +47 22 24 20 30
Fax: +47 22 24 20 31
postmottak@norad.no
www.norad.no

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