PROGRAMME HANDBOOK

RenewableNepal

RenewableNepal is a Programme for supporting research based industrial development in Nepal. It provides funding support to collaborative R&D projects related to renewable energy technology, planned and implemented by R&D institution in Nepal in cooperation with local industries and Norwegian institutions & industries.

The Programme is jointly managed by
Kathmandu University (KU), Nepal, and SINTEF Energy Research (SEfAS), Norway.
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Content

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RenewableNepal Programme Handbook

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The contents of this Programme Handbook serves as major guidelines, conditions, and references for applying for project funding and carrying out R&D projects under the RenewableNepal Programme Framework. The contents of this handbook supersede the contents of the previous version of the "Programme Document" and the "General Terms and Conditions for R&D Project under RenewableNepal Programme Framework". The guidelines, conditions, and references stated in this handbook may be changed or amended by the Programme at any time. The Projects will be notified of such changes and revised conditions are effective from ONE MONTH after notification.

The right to explain or interpret the content in this handbook lies upon the Programme. The Programme shall be consulted for applicability of conditions in special situations.

This is the A4 version of the Handbook for soft copy distribution and its page numbers and layout do not match with the PRINTED VERSION.

Preface

RenewableNepal is a Programme for supporting research based industrial development in Nepal. Its purpose is not limited to providing funding support to selected cooperation R&D projects and ensuring that the supported R&D projects are carried out in an objectively outcome oriented manner. It aims to contribute to establish or strengthen the trend of developing and executing cooperation applied R&D projects between institution and industry in Nepal, for sustainable socio-economic development in an environmentally friendly manner. It therefore intends to stimulate Nepalese universities and research institutions for developing competencies for long term support to industrial development. One of the main tasks is to enable Nepalese institutions to design and implement applied R&D projects effectively in cooperation with the industry. This handbook has been published to serve this purpose.

Since the start of the Programme, the Programme has developed many guidelines and references related to the project design, project contracting, and implementation. These documents however were developed one after another sequentially according to the requirements in bits and pieces. It was needed to put the documents developed in a comprehensive format so that it may be referred by the projects supported by the Programme and the people willing to carryout applied R&D in Nepal within the Programme Framework or within other similar frameworks. This handbook therefore not only describes about the Programme, its Terms and Conditions, and Contracting Procedures, but it also describes in detail the project design procedure for such kind of framework. Therefore, this handbook may be used as a reference by all researchers in Nepal or elsewhere, who intend to develop applied R&D projects and implement in national or international cooperation framework.

Procedural transparency has been given utmost importance by the Programme. The Programme intends to maintain transparency in all level of its procedures. Therefore it is important that the Programme procedures are known to all concerned and everyone, who may contribute towards the procedural consistency, efficiency, and transparency. The Programme handbook therefore brings the important procedures of the Programme into the notice of the concerned or the general public. The Programme thereby expects contributions and comments so that the handbook may be refined and finally becomes a valuable reference for all, as the Programme ends in 2013.

Bhupendra Bimal Chhetri
Programme Manager
21 Oct. 10

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Chapter 1

About The Programme

1.1. Background

Cooperation between industry and research institutions on industrial R&D project has proved to work for industrial and technological self-reliance and for economic and social development of many developed countries. And, this method should be equally applicable to Nepal. Depending on the opportunities created/provided by the Government, Donor Agencies, Research Councils, and Foundations, many industries and institutions worldwide have proactively utilized such opportunities in developing high quality knowledge/technology, products, and services. The success stories associated with such activities are truly inspirational, particularly for developing countries like Nepal.

Naturally, in a developing country, the opportunities or the public support schemes to create or develop knowledge and technology, products, and services in local level are severely limited. The industries and institutions, both having limited capabilities, are mostly occupied with the day-to-day matters. Success stories of technological self-reliance and sustainable socioeconomic development may only be created through a highly proactive approach to utilize the opportunities and the resources available locally and globally; to create and/or utilize such opportunities in greater numbers. The proactive approach is indeed necessary in Nepal from all sectors, whether Government, Public, or Private.

RenewableNepal is a Programme that resulted from a proactive move of Kathmandu University (KU), Nepal, to create some opportunities of getting funding support to conduct Applied R&D at institutions and industries in Nepal. It is expected that the Programme will effectively contribute towards technologically self-reliant industrial development of Nepal, having sustainable positive socioeconomic impact.

The attempt to bring a Programme like RenewableNepal into existence could not have been possible without positive standpoints of SINTEF Energy Research, Norway, and Norwegian Agency for Development Cooperation (NORAD) towards KU. KU has a long history of effective cooperation with Norwegian Institutions, particularly NORAD, Norwegian University of Science and Technology (NTNU) and SINTEF. SINTEF is a leading applied research institute in Europe and has experience of more than 50 years in contract or project based applied research, conducted in cooperation with Norwegian universities and industries. SINTEF thus has achieved a significant number of successes in research based industrial development of Norway. It is indeed a very fortunate experience for KU to have SINTEF as a partner in the development of the concept of RenewableNepal and its implementation. Any assistance from Norway in the Programme, for example expertise services, technology and experience transfer, Norwegian industry involvement, etc., will be effectively coordinated by SINTEF so as to ensure that the goals and objectives of the Programme and Projects under the programme are satisfied.

The concept model for initiating research based industrial development activities in energy sector in Nepal, with universities as the centre of such activity, was first discussed between KU and SINTEF in June 2006. The initial model of cooperation considered capacity building of Nepalese research institutions and enterprise by obtaining expertise support from SINTEF. The model of cooperation however was extended to the establishment of an applied R&D support Programme in the renewable energy sector, so as to bring opportunities open for all institutions and industries in Nepal and Norway to participate within the framework. In September 2008, a seminar was organized by KU on “The Role of Research in Hydropower Development,” with support from NORAD. In this seminar, the concept of RenewableNepal Programme was

presented and discussed extensively. Institutions and industries from Nepal and Norway participating in the seminar exhibited great interest and intent to participate in the Programme. Encouraged from the interest and intent of participation from industries and institutions in Nepal and Norway, the proposal of RenewableNepal was prepared in a comprehensive format and submitted to NORAD for funding support in January 2009. The Programme got final approval in October 2009. The Kick-Off Meeting of RenewableNepal Programme was held in Nepal and the agreement between NORAD and KU was signed on 27 October 2009. In December 2009, KU and SINTEF entered into the institutional cooperation agreement regarding support to RenewableNepal Programme. The Programme Office at KU then began its operation from December 2009.

In short, RenewableNepal is a direct support from Norway in making Nepal more independent and self-reliant in utilizing its own huge hydropower resources as well as other renewable energy resources. It intends to achieve its primary aim by supporting applied R&D based industrial development projects in Nepalese research institutions, that are designed and implemented in collaboration with Nepalese industries, with expert or resource support from Norwegian institutions and industries. Although, the main part of this support is funding the major cost of the R&D projects, the Programme also intends to establish procedures that are essential for transparent and effective R&D project management system in Nepal.

1.2 Aim, Goal, Purpose, Outcome, and Outputs

The aim, goal, and purpose of RenewableNepal Programme, as indicated in the Programme Agreement, are as follows:

- ***AIM:*** To stimulate applied research at Nepalese universities and research institutions
- ***GOAL:*** To enable Nepal to utilize its natural resources of energy to develop a renewable energy supply for social and economic development in an environmentally sustainable manner
- ***PURPOSE:*** To build applied research capacity at Nepalese Universities and Research Institutions that can serve Nepalese energy industry in developing high quality products and services directed at utilizing the country's renewable energy resources.

The expected outcome and verifiable outputs of the Programme, as indicated in the Programme Agreement, are as follows:

- ***OUTCOME:*** Relevant competence and capacity built at KU or other institutions to design and implement research projects together with Nepalese energy industry.
- ***OUTPUT:*** Number of research projects, number of partners involved, number of prototypes of products and services developed, number of products put into the market, and contribution to the development of Nepali Energy/Power Systems.

Therefore, the Programme not only intends to provide funding support to the R&D Projects so that R&D project outputs are achieved, but it also focuses on long term and multiplier effects of the Programme. Notably, apart from the building of technical competence, it encourages institutions to learn well the strategic procedures in design and implementation of cooperation R&D projects, by actually doing it. Further, it emphasizes on R&D of commercial/economical, social, and environmental importance, along with sustainability of the applied technology development process.

1.3 Programme Organisation

The Vice-Chancellor of Kathmandu University is the chief responsible for the Programme. The programme is implemented by the School of Engineering of Kathmandu University, with the Dean of the School as the head of the Programme. The Programme is implemented in

cooperation with SINTEF Energy Research (SEfAS), in accordance to the institutional cooperation agreement between KU and SEfAS. On the daily basis, the Programme is managed by RenwableNepal Programme Office, setup at the School of Engineering, Kathmandu University. The office is operated by the Programme Manager and the Assistant Programme Manager.

The Steering Committee (SC) of the Programme is the prime body to make decisions on the Programme operation and project funding so as to ensure that the goal and the purpose of the Programme are satisfied. The SC comprises five members, with one each from the following institutions.

1. The Research Council of Norway (RCN)
2. Kathmandu University (KU)
3. SINTEF Energy Research (SEfAS)
4. A Nepalese Energy Industry
5. A Norwegian Energy Industry

The SC is chaired by the representative of The Research Council of Norway. The SC is appointed by the Vice-Chancellor of KU, upon recommendation from the Dean of School of Engineering of KU. Norwegian representatives in the SC are recommended by SINTEF. The SC meets at least semi-annually. It regularly, or at least semi-annually, keeps KU and SEfAS informed on the activity of the Programme. Decision on the Programme operation and the project funding will be made by a simple majority vote in the SC.

The SC is supported by the Programme Manager. The Programme Manager will report to the SC at its meetings and will, on regular basis, report to the KU member of the SC. The Programme Manager prepares SC meetings and presents agenda to a degree where the SC can make decisions. The SC decisions will be implemented by KU SoE in cooperation with SEfAS, through the Programme office.

The SC will:

1. Decide on criteria to evaluate, rank and select proposals.
2. Decide on rules and guidelines for operating the program: proposal process, evaluation and selection, allocate financial resources to projects and reporting.
3. Ensure that the Programme is known and encourage relevant industries and R&D institutions to forward project proposals within the framework of the Programme.
4. Decide on requirements of the reports from the projects and monitor their progress.
5. Ensure that participants in a project get advice on commercial utilisation of R&D results.

The organization of the Programme with current key contact persons is presented in the organization diagram in Figure 1.

1.4 Role of KU and the Programme Office

KU has the overall responsibility for planning, implementation, reporting and monitoring of the Programme. KU also provides access to laboratories, local personnel, and other resources at KU for the projects. It has the responsibility to ensure that the Programme is implemented according to the work plan and budget approved. It shall ensure that proper accounting is done in the Programme. It facilitates Norwegian visits to Nepal and also facilitates the process of import of equipments under the Programme if required. Moreover, imports or procurements in research project have to be carried out by the research projects themselves. It regularly communicates with NORAD and The Royal Norwegian Embassy at Kathmandu providing appropriate reports and updates. It regularly communicates with SINTEF in relation to the overall Programme operation. On a daily basis, the Programme is managed by RenwableNepal Programme office on behalf of KU.

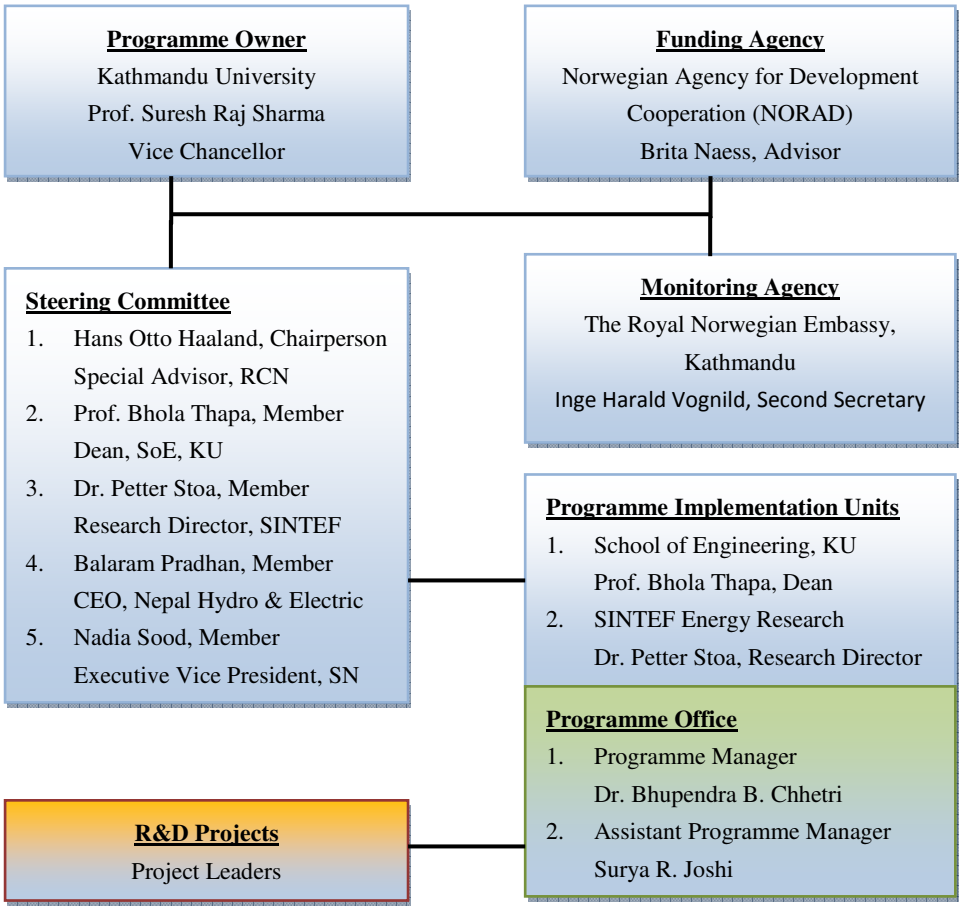

Figure 1: RenewableNepal Programme Organization Structure

As the programme is open for participation to all institutions and industries in Nepal, KU also can apply for R&D projects and implement such projects.

In short, the Programme office at Kathmandu University:

1. Calls for project application, processes and assesses the project applications, and prepares them for the decision in the SC
2. Assists the SC in establishing guidelines for program operation and project selection
3. Advises industries and R&D institutions in Nepal and Norway on projects that will fit within the framework of the Program.
4. Monitors all running project on behalf of the SC, call in project reports, assess the progress and present the reports to the SC.
5. Advises the participants in the projects in relation to the project implementation.

1.5 Role of SINTEF Energy Research in the Programme

Apart from assisting KU in the overall programme management, SINTEF performs the following activities related to the Programme.

1. Identify universities, institutions, and industries in Norway for possible participation as project partners
2. Actively help Nepalese institutions and industries to design projects
3. Fill in the areas where Nepalese researchers lack competence
4. Assure quality of research works in the projects.
5. Promote SINTEF participation in the projects

SINTEF also performs all fund disbursements to Norwegian Partners in the Programme funded R&D Projects and monitors related financial transactions.

1.6 Programme Period and Budget

The programme duration is from 2009 October to 2013 December. The Programme therefore shall conclude on 31.12.2013. First few months of the programme duration have been used for setting up programme infrastructure, and last few months will be needed for concluding the programme. **The Programme therefore intends to close all R&D Projects related activities by 31 October 2013.** The first call for project applications were made in April 2010. R&D Projects have started from July 2010.

The total programme budget is approximately 8.6 million Norwegian Kroner (NOK); out of which, 4.8 million NOK is available to fund various R&D projects under the Programme. The Programme funds on average 6 projects per year, with average project funding of 200,000 NOK per year per project. The programme aims to have 4-8 R&D projects running simultaneously. Individual project funding is limited from 50,000 NOK minimum to 500,000 NOK maximum. The R&D Project durations for the first call were from 1 year to 3 years. For subsequent calls, the possible R&D project durations will therefore be shorter.

All Nepalese transactions related to the Project Funding are carried out in Nepalese Rupees (NRs.). A flat conversion rate for general purpose is adopted for the entire programme duration; 1NOK=12NRs.

1.7 Basic Criteria for Funding R&D Projects

The basic criteria for funding R&D projects by the RenewableNepal Programme are as follows.

1. Project application by an R&D institution in Nepal
2. Participation in the project by at least one industrial enterprise of Nepal as main industrial partner
3. Project aimed at developing product, services, and tools for renewable energy production and energy/power systems that may be hardware or software
4. Project with well defined assessable research and development objectives with commercial aims in the area of renewable energy valuable to Nepal.
5. Project with anticipated positive socio-economic and environmental effects
6. Project that preferably involves Norwegian enterprise and institutions/researchers as partners (Norwegian enterprise and institutions may participate as partners only if they contribute with vital competence and resources to the projects)
7. Project with minimum 50% of the budgeted activities in Nepal, if there are international partners
8. Industry contribution of minimum 20% of the total project cost (if not, minimum 20% of the total programme funding awarded to the project), in cash or in kind from the industrial partner in Nepal (This criteria may be relaxed, if the industry in Nepal for some special reason cannot participate otherwise)
9. Project that encourages participation of women in research
10. The Programme prefers partnership with Norwegian Institution and Industry. Moreover, other foreign partners may participate in the project on a similar basis.

1.8. Programme Priority

1.8.1 Partnership Composition Priority

The programme prefers to support the projects with partnership among both Nepalese and Norwegian institutions and industries (including public/private utilities, government

and non-government organizations/agencies, and other funding agencies). In the programme's viewpoint, both Nepalese and Norwegian participation in the project ensures that sufficient expertise and resources are available for the project, in addition to the Programme Funding and the capabilities of the basic partnership of Nepalese R&D institution and industry. Norwegian practices can play key role to ensure that the project goals are met as promised. Moreover, it may be difficult for many Nepalese applicants to find and manage such preferred partnership composition. Table 1 indicates a guide related to project funding priority of the programme and relative funding amount to be expected from the Programme for the project according to the partnership composition. The funding limits depend on the project duration and particular call for project application. Category E indicates the intention of Norwegian industry to establish a Nepalese company at the end of project period. Category F indicates a project application with Spin-Off or Spring-Off objective. It is therefore imperative that the Programme in general intends to fund R&D projects from category A to D.

Table 1: R&D Project Partnership Priority of the Programme

Category	Project Participants				Programme Funding	
	From Nepal		From Norway		Priority	Amount
A	Institute	Industry	Institute	Industry	Highest	Highest
B	Institute	Industry	Institute		High	High
C	Institute	Industry		Industry	High	High
D	Institute	Industry			High	Moderate
E	Institute			Industry	Moderate	Moderate
F	Institute				Moderate	Low

In the partnership composition, there can be multiple same kinds of partners as well (for example, two or more research institutions or two or more industries). The Programme priority and funding amount remains the same, however. The additional same kind of partner is designated as duplicate partner. It is possible to find a new partner and bring the new partner into the Project Consortium even after the award of the project, if the original Project objectives are kept intact or enhanced. Additional funding request may be made if the partnership composition category elevates. The additional funding request must be in line with the funding limits specified for different partnership composition by the programme at the time of particular call applicable to the project. Please also refer to the "General Terms and Conditions for R&D Projects" Chapter. The Programme may also assist in finding Norwegian expert partners or resource partners or Nepalese industry partners. Further, the projects are also encouraged to find new partner leading to stronger partnership composition.

1.8.2 Thematic Classification

Although the Programme intends to fund any project related to renewable energy systems within the Programme Framework, the following grouping and/or thematic classification may be observed by the Programme while processing the R&D project applications and award of the project. The sample or specific project areas in various thematic classes could be as indicated.

1. **Hydropower**
   a. Development of small or medium turbines
   b. Development of small or medium generators
   c. Effective method for sediment handling
   d. Effective method for combating sand erosion problem in turbines
   e. Hydropower project design and management
   f. Hydropower plant component design and production
   g. Strategic use of Nepal's hydropower
   h. Hydropower plant operation and maintenance management
   i. Regulators and controllers

2. **Bio-Energy**
   a. Small and medium sized efficient combustion stoves
   b. Generation of energy from waste
   c. Production, purification, storage, transportation, and distribution of bio-fuel/biogas
   d. Management and efficient use of biomass
   e. Bio-energy conserving/enhancing bio-diversity

3. **Solar and Wind Energy**
   a. Generators and turbines for wind power
   b. Design and manufacturing of wind turbine components
   c. Power electronic converters/controller for solar or wind
   d. Versatile use of solar and wind energy
   e. Solar thermal systems
   f. Localization of solar systems design

4. **Energy/Power systems**
   a. Efficient power system operation and management
   b. Mini and micro grid systems
   c. Operation and maintenance of distribution systems for improved availability
   d. Efficient energy use
   e. Hybrid systems for cooking/heating and electricity (solar, wind, hydro, bio-mass)
   f. Productive use of renewable energy
   g. Heat pumps for productive use renewable energy
   h. Utilization of waste heat
   i. Public management of electricity production and distribution
   j. Testing and quality assurance of power apparatus, such as High Voltage testing
   k. Electricity pricing tools and energy market design
   l. Easily transportable or mobile energy systems

1.9 Amount of Funding Support from the Programme for R&D Projects

At present, Table 2 indicates the funding limits (minimum and maximum) generally observed by the Programme; in accordance to the partnership composition and the duration of the project.

Table 2: Programme Funding Limits According to Partnership Category and Project Duration

Category	Project Duration and Funding Limits (NOK in thousands)		
	1 Year	2 Year	3 Year
A	200-300	300-400	400-500
B	150-250	250-350	350-450
C	150-250	250-350	350-450
D	100-200	200-300	300-400
E	100-150	150-250	200-350
F	50-100	100-200	150-300

Note: Under current programme status, no further 3 year duration project funding support is possible.

1.10 Current Programme Status Related to R&D Project Funding

At present, the Programme has already awarded funding to 7 R&D projects. The Project Contracts have been made with the Project Owner institutions and project activities are underway. Table 3 summarizes the nature of R&D projects, who have been already receiving the Programme Funding.

Table 3: R&D Projects Currently under Funding from the Programme

Project No.	Project Owner (in Bold) & Partners	Partnership Category, Duration	Project Title	Total Programme Funding
172	**Center for Energy and Environment Nepal (CEEN)** Mhepi Briquitte Industries Nepal Academy of Science and Technology (NAST),	D,3 Yr	Production of biomass briquetted fuel based on agro forestry waste as substitute for fuel wood in domestic and industrial sector of Nepal	390,000
242	**Kathmandu University** CEPTE(KU) Krishna Grill and Engineering Works P. Ltd	D,3 Yr	Design and Development of Mini-Grid for Efficient Use of Distributed Hydropower System	400,000
248	**Kathmandu University** Sun Works Nepal	D,3 Yr	Design, fabrication and test of a biomass gasifier for small size petrol and diesel engines	400,000
327	**Kathmandu University** Altitude Innovation Pvt. Ltd.	D,2 Yr	Solar and WLED for Greener and Brighter Nepal	150,000
379	**Kathmandu University** Rapti Renewable Energy Services Private Limited,	D,2 Yr	A statistical analysis of parameters measuring the socio-economic impacts of renewable energy projects specially biogas on its consumers and the use of the results obtained on product development and improvement.	300,000
437	**Kathmandu University** Nepal Hydro & Electric Norwegian University of Science and Technology Dynavec AS, Norway	A,3 Yr	Development of Hydraulic Turbines with new Design Philosophy as a foundation for Turbine Manufacturing in Nepal	476,000
488	**People, Energy and Environmental Development Association** Kathmandu Alternative Energy Group P. Ltd	D,1 Yr	Developing Electrical Load Controller of Low Head Propeller Pico Turbine and Field Research for Rural Use in Nepal	200,000

The programme intends to finalize one more project funding in 2010 to make the total number of projects funded 8 in total, with a funding allocation of 450,000NOK. Therefore, total R&D project funding allocation from the programme budget in 2010 will be NOK 2,766,000.

Chapter 2

General Terms and Conditions for R&D Projects Supported by RenewableNepal Programme

2.1. Definition and Interpretation

The following words and expressions in this General Terms and Conditions shall have the meanings assigned to them except where the context otherwise requires:

2.1.1 "Programme" means the RenewableNepal Programme owned by Kathmandu University, Nepal, which is a "Programme for Research Based Industrial Development in Nepal", jointly managed by Kathmandu University, Nepal, and SINTEF Energy AS, Norway, and funded by Norwegian Agency for Development Cooperation (NORAD), which is represented by the Royal Norwegian Embassy at Kathmandu. In all the day to day matters, "The Programme" is represented by the Programme Manager and/or the Assistant Programme Manager.

2.1.2 "Project" means an R&D Project in context supported by the RenewableNepal Programme funding.

2.1.3 "Project Owner" means an organization to which an R&D Project is awarded by RenewableNepal Programme by signing a Project Contract.

2.1.4 "Project Administrator" is an administrative authority in the Project Owner organization, a person responsible for a division in which the Project is being implemented. The Project Administrator is an interface between the Project and the Project Owner organization executive body. The Project Administrator facilitates the Project related decision making in the Project Owner organization, in relation to the Project Owner organization's rules and regulations. The Project Administrator takes up the role of Institutional Contact Person, unless specified otherwise. The Project Administrator is an integral part of the Internal Evaluation of the project progress and advises the Project Leader for efficient execution of the project plans.

2.1.5 "Project Leader" is the main responsible for all technical and administrative activities within the Project. The Project Leader is the main link between the Programme and the Project for all Project related communications. The Project Leader designs and implements/executes the Project on behalf of the Project Owner. The Project Leader has the authority to employ project staffs and authorize all financial transactions related to the Project and delegate the authority to any Activity Leader.

2.1.6 "Project Partner" is an organization, which implements/executes part of the project activities in collaboration with the Project Owner according to the Project Consortium Agreement and approved Work Plan, Schedule, and Budget. Project Partner organization shall appoint an Activity Leader in relation to the project activities in the partner organization.

2.1.7 The "Activity Leader" of a partner organization is responsible for all technical and administrative activities in the partner organization in relation to the execution of the Project. The Activity Leader of the partner organization will regularly communicate with the Project Leader for the project related matters. The Activity Leader of the partner organization is an interface between the Project and the project partner organization's executive body. The Activity Leader has the authority to employ project staffs and authorize all financial

transactions related to the Project in the partner organization, with the permission from the Project Leader.
The Activity Leader of the partner organization shall not be confused with a general activity leader assigned to lead activities in the work plan of the project.

2.1.8 "Project Contract" is the contract signed between the Project Owner and the Programme regarding the R&D Project. It describes all primarily essential aspects regarding the Project.

2.1.9 "Project Consortium Agreement" is an agreement between the Project Owner and Partners to efficiently execute the Project in a collaborative framework and share the benefits of the Project. The agreement defines the roles and responsibilities of the Partners, communications methods, method of sharing the physical and intellectual properties generated in the Project, method of resolving disputes, overall partnership management, contribution requirements, etc.; in relation to the collaboration regarding the implementation of the Project. The Project Consortium Agreement is signed by the Project Administrator on behalf of the Project Owner organization and by designated persons of the partner organizations.

2.1.10 "Contribution in Cash" is a contribution from the Project Owner or Partner or any Third Party to the implementation of the Project and is transferred in cash to Project Account for a purpose as decided by the Project.

2.1.11 "Contribution in Kind" is a contribution from the Project Owner or Partner or any Third Party in terms services or facilities or goods solely to be used by the Project, in a way that the equivalent monetary value of the services, use of facilities, or use goods are appropriately accounted and no payments are demanded or received from the Project.

2.1.12 "Invoice to Project" is a mechanism of getting goods and services in the Project to be paid from the Project Account to the supplier or provider.

2.1.13 "Third Party" means the party not directly related to the Programme and the Project. Third Party usually denotes a party other than KU, SINTEF, NORAD, the Norwegian Embassy, the Project Owner, and the Project Partners.

2.2 Execution of the Project

2.2.1 Work Plan, Schedule, and Budget

The Project shall be executed by the Project Owner in collaboration with the Partners in accordance with the Programme approved Work Plan, Schedule and Budget as set forth in the Project Contract and any subsequent updates in it. The Project Owner cannot invoke conditions not written in the Project Contract and subsequent updates as approved by the Programme.

Project Work Plan, Schedule, and Budget are updated annually, depending on the actual project activities and actual expenditures. The Project Owner shall make update request at the time of submission of the Annual Report. The Programme will generally respond within THIRTY DAYS. A written response from the Programme is required regarding the changes or updates that are accepted and changes or updates that are rejected or adjusted.

2.2.2 Fund Disbursement from the Programme

The Programme will disburse fund to the Projects annually.

As soon as the Project Contract is signed and the Project Consortium Agreement is approved, the Project Leader makes a request to the Programme for the disbursement

of 80% of the First Year Programme Funding part of the project budget. **This will accompany the submission of a detailed First Year Work Plan, Schedule, and Budget, in the format prescribed by the Programme and in line with the Project Contract**. The request shall be made separating the estimated costs of activities in Nepal and in Norway. The Programme will disburse the fund after approval of the Work Plan, Schedule and Budget for the First Year. The funding for activities in Nepal is disbursed to the Project Owner in Nepalese Rupees (NPR, 1 NPR=12 NOK). The funding for activities in Norway is disbursed to the designated Partner organization in Norway in Norwegian Kroner (NOK) or other convertible currency by SINTEF Energy AS on behalf of the Programme. The Programme will generally respond within THIRTY DAYS to the submission of the request and subsequently disburse the fund within THIRTY DAYS of the approval.

Other disbursements from the Programme are made according to the Annual Report and subsequent detailed Work Plan, Schedule and Budget for the Next Year; in the interim period. The disbursement will be based on the approval of the Report, Expenditures, Work Plan, Schedule, and Budget. The Programme will generally respond within THIRTY DAYS of the submission. After the approval from the Programme, the Project Leader will make disbursement request according to the content of the Approval. The Programme will then disburse the fund according to the Annual Report and the Budget of the Next Year approved, in a way that 80% of the cost of activities approved from the Programme funding for Next Year is disbursed and actual cost approved from the Programme Funding for the previous year is covered.

The final disbursement if needed will be based on the approval of the Final Report**. Any unspent fund in the Project Account shall be returned to the Programme; to KU or SINTEF as applicable.** The Programme will not be obligated to make fund disbursement for the costs exceeding the approved Total Programme Funding (TPF) to the Project. Under special circumstances only, the Programme may consider disbursement for actual expenditure exceeding the TPF approved. Moreover, the **Programme under no condition will disburse fund exceeding 5% of the TPF approved**. Other conditions may apply to the final disbursement, refer to Section 2.2.3.

2. 2.3 Limits in the Project Spending and Other Limits

The limits on project spending from the Total Programme Funding (TPF) are given in Table 4, along with other limits on project financing from the Programme.

Table 4: Limits on Project Spending from the Programme Funding

<table>
<tr><th>Budget Heading</th><th>Nominal Distribution in TPF</th><th>Actual Expenditure in Heading Groups (of TPF)</th><th>Actual Total Expenditure (of TPF)</th><th>Annual Budget vs. Actual Annual Expenditure</th><th>Other Programme Limits</th></tr>
<tr><td>A. Expert Services</td><td>20%</td><td>-</td><td rowspan="5">+5% Maximum</td><td rowspan="5">+10% maximum in total annual budget and +20% of budget in individual budget heading</td><td rowspan="5">Minimum 50% of TPF in the cost of activities in Nepal
Contribution from Nepali Industry Partners of Minimum 20% of the TPF</td></tr>
<tr><td>B. Active Researcher</td><td>30%</td><td rowspan="2">Minimum 50%</td></tr>
<tr><td>C. Equipment, Tools, Materials</td><td>35%</td></tr>
<tr><td>D. Other</td><td>10%</td><td rowspan="2">Maximum 20%</td></tr>
<tr><td>E. Admin</td><td>5%</td></tr>
</table>

Note: The **Programme under no condition will disburse fund exceeding 5% of the TPF approved.** Project applicants shall consider content of this table as the contracting limits.

The minimum 20% industrial contribution requirement for Nepalese industry may be waived partially or totally by the Programme if the industry could not have participated in the Project otherwise.

Although the limits or distributions are specified for TPF, it is preferable that the limits are observed in terms of Total Project Expenditures (TPE) or Total Project Budget (TPB, including contributions). **The Programme has put conditions on TPF rather than Total Project Budget (TPB), considering practicalities associated with local conditions**.

If a Project has not observed the limits, the Programme will have rights to adjust the annual or final disbursement.

2.2.4 Project Accounting

The Project should set up two separate accounts for project accounting; one for activities in Nepal in the Project Owner organization and one for activities in Norway in the Partner Hub organization in Norway. The accounts must be set up in a commercial bank or in the accounting system of the organization in a way that automated account statement can be generated at any convenient time. Any fund requirement for other Partners shall be made available from these accounts on the basis of evidence of actual expenditures. Funds may be made available to other Partners or entities in advance on the requests for project specific tasks, with specific dates for advance clearance. The advance is cleared on the basis of evidences of actual expenditures. The Project Leader handles the account at the Project Owner organization and approves all the payments from the account. The Activity Leader in Partner Hub organization in Norway handles the account in Norway and approves all the payments from the account. **The Norwegian account statement must be approved by the Project Leader later, at the time of Annual Reporting**.

All the payments from the Project account shall be based on appropriate evidences and justifications. The Project Leader and the Activity Leader should keep records of all financial transactions in originals or copies. If the originals are to be required by the respective organizations, then copies of all transactions are to be kept, preferably both in electronic form (scanned document) and paper form. Later, **certified copies by the Project Leader or the Activity Leaders are needed to be submitted to the Programme at the time of Annual Reporting**. The record of transactions shall be arranged according to the budget headings, separating personnel costs and other costs, in the sequential order of date of expenditure.

For regular personnel costs, employment contract, time sheet of work, and pay-sheet are needed in minimum. For short-term personnel costs (less than 3 months), the award of work defining the assignment details and wage, the statement of work, and the pay-sheet are needed in minimum.

For the cost of equipment, tools, materials and services, appropriate invoices or bills or payment receipts along with payment order or debit note or payment approval note are needed. Any cost that may not be accounted easily (such as rent of space, electricity, water, use of equipment, use of tools, etc.) shall be based on a rational claim and shall be approved by the Project Leader or the Activity Leader. Any other minor cost that has actually occurred but sufficient evidence could be obtained shall be accompanied with a claim and justification for not having sufficient evidence. The Project Leader or the Activity Leader may approve or disapprove or adjust such claims of costs.

The Project Leader and the Activity Leader shall also keep record of all the Contributions in Kind in exactly similar way described above with similar evidences. The statement of contributions shall be prepared based on the evidences and statements/approval by the

Project Leader or the Activity Leader. Contributions shall not be counted without similar evidences and justifications as needed by the financial transactions. If a contribution is made in the form of procurement or construction of a durable (buildings or setups of some form, equipments, computers, furniture, etc.), the total cost of procurement or construction may not be considered contribution, unless the life of such durable ends within the project period and it is procured or constructed solely for use by the Project. Contribution of in kind for any durable will generally be counted based on the equivalent value of its actual use in the project.

Administrative and other personnel services contributions in kind may be estimated by using an appropriate value for the time costs and reported by the Project Leader or the Activity Leader as contributions.

All project costs must be in accordance to the local standard costs for certain action in a particular activity location.

All expert/leader costs shall generally come under the Expert Services.

Any mission (domestic/international travel, field visit) costs accounting must be based on a predefined arrangement for the coverage of the mission costs, both Invoice to Project and Contribution in Cash/Kind parts. The mission eligible costs for the Invoice to Project mode are: cost of cheap means of transportation (discounted economy class return air ticket for air travel, train, and buses), accommodation costs at tourist class hotels, local transportation costs, food cost, pocket expenses, communication costs, others as necessary for the mission. Food costs and pocket expenses, accommodation cost included or excluded, may be claimed as per diem or daily allowance (a fixed amount per day from date of departure for the mission to date of departure from the mission). Daily allowances claim for a mission shall be based on already defined rate or mechanism and shall be based on evidence of mission, and approval by the Project Leader or the Activity Leader. The per diem for Norwegian travels shall generally be in Norwegian Government rates. Partner organization rules shall be followed.

Any foreign currency expenses in the Project shall be converted to the expenses in local currency by referring to one or combination of the following exchange rate sources.

1. Actual Exchanged Rate based on evidence of exchanges
2. Nepal Rastra Bank (http://www.nrb.org.np/) for daily rates and average rates
3. Norges Bank (http://www.norges-bank.no/)
4. IMF: http://www.imf.org/external/np/fin/data/param_rms_mth.aspx (for daily rates)
5. European Commission Rates: http://ec.europa.eu/budget/inforeuro/ (for monthly rates)

In overall, the project accounting shall be kept in a way that all costs related to the implementation of the project including contributions are transparently and realistically accounted for in the total cost of project implementation and relevant documentary evidences are available.

2. 2.5 Employments in the Project

2.2.5.1 General Conditions of Employment in the Project

Employments may be provided in the Project for any duration inside the project period. The following persons are employed for entire project period unless specified otherwise.

1. The Project Administrator
2. The Project Leader

3. Activity Leaders of Project Partners

The Project shall normally employ personnel on the following basis.

1. Hourly basis: for all employments on flexible timing; the work is reported/invoiced by filling hourly time sheet for an appropriate period (usually a month)
2. Monthly basis: for all regular time employments full-time or part-time; the work is reported/invoiced by filling a monthly time sheet with hourly/daily work description
3. Daily basis: Short term employments on daily wage basis; the work is reported/invoiced by filling daily time sheet; for example, field data collection support staff.

Note: The above conditions have been amended from the previous version.

For all employments in the Project of duration 3 months or above, an employment contract should be made. Short term employments of less than 3 months of service duration may be provided with simple work assignment details and remuneration definition.

The personnel with their names mentioned in the Original Contract may be employed according to the Work Plan, Schedule, and Budget. Others should be employed on a competitive basis with a public call in an appropriate media. Women should be given priority for R&D employments.

The salary rate for any employment shall be in accordance to the standard gross salary in the employer organization or the place of work corresponding to the qualification of the staff.

Employment conditions must be acceptable to the employee, the employer organization, and the place of work.

In general, no personnel shall be allowed to work in the Project without employment contract or work assignment details and confidentiality agreement.

Transparent and fair employment procedures and conditions are required, abiding by the regulations of the employer organization, place of work, and labour laws of respective countries.

2.2.5.2 Employers in the Project

The following persons will employ following project staffs in the project unless specified otherwise.

1. The contract signing authority of Project Owner Organization employs the Project Administrator
2. The Project Administrator employs the Project Leader
3. The contract signing authority of Partner Organization employs the Partner Activity Leader
4. Other employments are provided according to the Work Plan and Budget on Schedule by the Project Leader or Activity Leaders with approval from the Project Leader.

2.2.5.3 Classification of Working Hours

The following two classes of working hours may be used.

1. Normal Working Hours (NWH)
2. Overtime Working Hours (OWH)

The definition of NWH and OWH are dependent on the total regular employment/involvement status of the employee that includes the employment/involvement in the project and elsewhere. In general, NWH employment is considered when the total regular employment/involvement hours in a month of the employee is within the regular full-time standard effective working hour per month of the place of work or employer organization. It is estimated based on standard working hour per day and working days per month. It is irrespective of the working time of the day.

OWH employment is generally considered when the total regular employment/involvement hours of the employee (including all current employments) exceeds the NWH standard per month and the service of such personnel is absolutely necessary on OWH for the operation of the Project. OWH employments shall be precisely defined and shall observe the limits on maximum effective working hours per day, maximum working hours on holidays, and total maximum working hours per month, in a way that over stressed working condition in overall regular working of the employee is avoided**. OWH assignments must be agreed between the employer and the employee, stating the reason for need of OWH works.**

The employment contract shall clearly mention the NWH employment and OWH employment conditions, including salary for NWH and OWH. NWH and OWH salary may be same or different. OWH salary rate cannot greater than 150% of the NWH rate.

Separate time-sheet of work is needed from the employee for NWH and OWH works. Fair, reasonable, and transparent NWH and OWH employments and works are the joint responsibilities of the employer and the employee.

Leave or partial absence of the staff from duties on personal reasons in NWH may be compensated by working in off working hours or holidays within a limit and should be reported in NWH time-sheet.

Note: The above conditions have been amended from the previous version.

2.2.5.4 Assignment to Work in the Project from the Primary Employer

If the employee is already a full-time employee of an organization (primary employment organization including the Project Owner and the Partners), then the primary employment organization shall/may officially assign the employee to work in NWH in the Project. The mode of employment may be “Contribution in Kind”, “Invoice to Project by the Primary Employer”, “Invoice to Project by the Employee”, or mixed. Any additional encouragement allowance to the employee resulting from the assignment in the Project in “Invoice to Project by the Primary Employer” shall be the responsibility of the primary employment organization. Separate time-sheets of work for “Contribution in Kind”, “Invoice to Project by the Primary Employer” and “Invoice to Project by the Employee” are needed from the employee. Personnel cost “Contribution in Kind” from the employer organization is only possible from the assignment to work in NWH of the primary employment organization.

It is imperative that the Project Owner and the Project Partners organizations are obliged to assign the Project Leader, Partner Activity Leaders, and any other full-time employee of the organization mentioned as project employee in the Project Contract to work in the NWH of the organization, as necessary according to the project contract.

Note: The above conditions have been amended from the previous version.

2. 2.5.5 Employment to Students in R&D Works

The Programme does not intend to provide scholarships/fellowships to students at universities. Moreover, it encourages projects to provide as much R&D jobs as possible to young researchers locally, particularly encouraging graduate programme students. The students may be employed as researchers if they are

1. allowed to officially work in the project for indicated number of hours per week/month in their academic programme and
2. Preferably doing their academic project/thesis work under a related theme as the funded project title.

An Employment Contract shall be made for the students considering their total involvement requirements in the regular Academic Programme in such a way that their regular academic activities are not adversely affected by the employment in the project. **NWH and OWH limits for students should be very carefully considered, and they shall normally be entitled to obtain payments for their entire work**. Student employments must be endorsed by the Academic Supervisor and Academic Administrator.

2.2.5.6 Personnel Hours Contribution in Kind

The "Contribution in Kind" in the Project from personnel shall be appropriately supported by their overall working status. The "Contribution in Kind" in terms of Personnel Hours normally results from the assignment from the Primary Employment Organization to work in the Project in NWH without demanding payment or demanding less payment than deserving from the Project for the work, while the Personnel receives at least the normal salary payment for the hours dedicated for work in the Project from the Primary Employment Organization or in parts from both the Primary Employment Organization and the Project.

An employee or any relevant person may privately make "Contribution in Kind" in the Project in terms of Personnel Hours if the employee or the person has already secured the normal salary by working in the Project and/or elsewhere as a regular employee.

In general, students MAY NOT work in the project in "Contribution in Kind" mode. **This condition may be relaxed if the student's academic project is directly related to the R&D Project.**

Note: The above conditions have been amended from the previous version.

2.2.5.7 Essentials in the Employment Contract

In order that a transparent mechanism is used in the employments and salary/contribution calculations, the following items are generally regarded as essentials in the Employment Contract. The information should be as per the current overall employment/involvement status of the employee. If the status changes, contract shall be revised.

1. Name of the Employee:
2. Date of Birth:
3. Personal Address (mailing, e-mail, phone):
4. Highest Academic Qualification (if student, Programme and year):
5. Relevant Equivalent Work Experience Years (as recognized by the employer):
6. Period of Employment in the Project:
7. Primary Place of Work (Project Owner or Partner Organization or other):
8. Position in the Project:
9. Equivalent Full-Time Position in the Place of Work or Employer Organization:

10. Normal Working Hour in a Day in the Place of Work:
11. Effective Working Hour per Day in the Place of Work:
12. Approximate Working Days and Hour per Month in the Place of Work:
13. Salary Per Month and Per Hour of the Equivalent Position:
14. Nominal NWH per month considered by the Project:
15. Maximum OWH per month considered by the Project:
16. Time Basis of Employment in the Project and Salary:
    a. Hourly (considered as the general basis of employment in the project, flexible hours)
        i. Nominal X NWH hours per month or X NWH hours per/in period, NWH salary per hour (SPH)
        ii. Maximum additional Y OWH hours per month or Y OWH hours per period/assignment, OWH salary per hour, OWH assignment details
    b. Monthly (Full time or regular employment)
        i. Fixed time from AB:CD to EF:GH hrs, effectively X hour per day, approximately Y days per month
        ii. Flexible time, effectively X hours per day, approximately Y days per month
        iii. Salary per month
        iv. Allowed paid leave per month/year and/or total in the period of employment, salary deduction rate per day for extra leave in a month, any yearly bonus (for regular employee with major time contribution)
        v. Maximum additional Y OWH hours per month, OWH salary per hour, OWH assignment details
17. Other Employment/Involvement Status than the Project
    a. For Regular Employment/Involvement in Any Organizations
        i. Time Basis of Employment/Involvement in Other Works than the Project:
        ii. Total Employment/Involvement Hours: X Hours per month
        iii. If the employee is assigned to work in the Project by Primary Employer
            1. Total hours per month or per period assignment:
            2. Basis of assignment
                a. Invoice to Project (from employer/employee)
                b. Contribution in Kind
                c. Invoice to Project X hours and Contribution in Kind Y hours
    b. For Students
        i. Time Basis of Involvement in the Academic Programme: Full-time or Part-time
        ii. Availability to work in the Project (considering relevance of academic research or project to this Project): Total X NWH and maximum Y OWH per month
18. Job Responsibilities:
19. Time Sheets Requirements: (mention all applicable)
    a. Invoice to Project
        i. NWH time-sheet
        ii. OWH time-sheet
    b. Contribution
        i. NWH time-sheet

ii. OWH time-sheet

20. Salary Payment Method: Against approved time sheet every month or every period
21. Requirement of Performance Plan and Performance Report: for example every six month for regular employment
22. Conditions of Confidentiality:
23. Contract Termination and Revision Condition:
24. Immediate Supervisor (Personnel Administrator):
25. Name of the Employer:
26. Position of the Employer in the Project:

The contract is signed in two copies, one each for the employer and the employee.

Signature of the Employee

Signature of the Employer

Signature of the Supervisor (if different from the employer)

Official seal of employer organization (if necessary)

Date of Signing of the Contract:

2.2.6 Procurements

The Project Owner and Project Partners shall undertake to effect all procurements of goods and services necessary for the implementation of the Project according to the Work Plan, Schedule, and Budget. The procurements shall be undertaken considering the location of use or consumption and plan of final ownership for durables.

The procurements shall be performed in accordance with the generally accepted procurement principles, good procurement practices and the internal procurement regulations of the applicable organization, which are in accordance with the regulations of the applicable country.

The Project Owner and the Partners shall observe the highest ethic standards during the procurement and execution of contracts. No offer, gift, payment or benefit of any kind, which would or could, either directly or indirectly, be construed as an illegal or corrupt practice shall be accepted by the procuring person or organization.

The projects are entitled to submit documents related to the procurement process followed, if the Programme demands for such, on any procurement.

2.2.7 Consideration of Applicable Taxes

The Budget for the Project is regarded as inclusive of all the applicable taxes. Applicable tax to be deducted at source under the prevalent laws of the country of activity shall be deducted from each payment and deposited the same to the concerned tax office by the Project Owner and the Partners. Any tax related concerns shall be brought into notice of the Programme or the Project Consortium so that appropriate resources may be consulted. Tax exemption provisions of the country of activity for research and development purpose shall be utilized by the Project Owner or Partners on their own initiatives.

2.2.8 Intellectual Property Rights (IPR)

The Programme does not intend to own any intellectual property right related to knowledge, products, and services developed under the projects. The responsibility of

managing intellectual property created during the projects lies with the Project Owner and the Partners.

Intellectual Property Rights are managed by the Project Consortium Agreement. The IPR management agreement shall follow generally accepted good partnership practice principle, that is, proportionate distribution of the IPR according to the contributions in generating it. The Project Owner and the Partners shall generally be entitled to use all experience and professional knowledge that have been acquired during the execution of the Project. The IPR management agreement shall respect the Programme objectives: to develop competence in research institution to be able to serve energy industry in long term, to contribute in industrial development through R&D, and to commercialize product and services for positive socio-economic development.

In relation to the documents submitted to the Programme by the Project, if there is an IPR related issue, it shall be indicated with attribute “Restricted Confidential”.

2.2.9 Ownership of Equipments and Durables

The ownership of all the equipments and durables procured under a project with majority programme funding lies with the Programme during the project period. The ownership will be transferred to the Project Owner and Partners, upon successful completion of the project. The Project Owner shall make the ownership transfer request upon successful completion of the project (after the approval of the Final Technical and the Final Financial Report). **If a project is terminated in the interim or for some reason fails to continue, then the Programme will have the right to obtain the equipments and durables back.** The Programme however may also decide to transfer the ownership to the Project Owner and the Partners, even if the project fails. In overall, the Programme does not intend to own equipments and durables procured under a project.

It is advised that any equipments and durables be kept in a separate project book-keeping. The equipments and durables of remaining book value shall be entered to the organizational book-keeping after the ownership is transferred.

The ownership and location of equipments and durables issues shall be addressed in the Project Consortium Agreement. In general, test and measurement equipments will lie with the Project Owner or Institutional Partner and manufacturing or processing related equipments lie with the Industrial Partners. Other durables may be distributed based on their location of use.

The property of the Programme on Project Owner or Project Partner premises shall be taken care of by the Project Owner or Partner. The loss or damage to such properties must be reported describing the circumstances to the Programme as soon as such incident is noticed. The Project Owner or Partner is not held responsible for compensation for the loss and damage, unless the loss and damage has occurred due to the intentional negligence of the caretaker.

2.2.10 Good Partnership Practice

The partnerships in the project shall follow good partnership practice principles. All partners must have understood their role and obligations, as described in the project contract and the Project Consortium Agreement. All partners must consult and communicate with each other regularly. Any substantial deviation from Work Plan must be agreed by the partners. The partners should agree on an equitable distribution of equipments and durable supplies purchased under the project upon completion of the project. The partners should agree on equitable distribution of Intellectual Property Rights of the intellectual wealth generated during the project.

2.2.11 Impartiality, Transparency, and Avoidance of Corruption

The Projects shall give utmost priority to impartiality, transparency, and avoidance of corruption in the execution procedures.

In order to avoid corruption, financial procedures (procurements with and without competitive procedure) should match with organizational financial regulation and should be transparent.

In order to ensure the impartiality, employment opportunity and business opportunity should normally be open so that everyone eligible may participate and obtain the opportunity based on the merits suited to the Project requirements.

The Project procedures shall be transparent in a way that for every action sufficient documentary evidences are available to support the relevance of the action, if needed to be furnished.

Any corrupt practices in relation to the Project noticed should be immediately brought into attention of the Programme by the concerned.

2.2.12 Confidentiality

Any document submitted to the Programme by the Project should clearly state whether the part of document or whole document is “Restricted Confidential”. The documents with “Restricted Confidential” items may be accessed and discussed by the following without any restriction.

1. The Programme Office
2. Steering Committee Members of the Programme
3. Dean of the School of Engineering
4. Key officials of KU, such as Vice-Chancellor, Registrar, Head of Finance Division, and Chief of Administration
5. Persons designated by KU, SINTEF, NORAD and The Royal Norwegian Embassy, Kathmandu
6. Persons designated as the Programme or the Project Reviewer
7. Other persons allowed by the agreement between the Programme and the Project Owner

No confidentially agreement will generally be made with the persons mentioned above regarding the documents. Maintenance of confidentiality of “Restricted Confidential” items will be regarded as a moral responsibility.

Any original technical matters or explicitly copyrighted materials in the documents may not be used by any of the persons having access to the documents, without proper authorization from the Project Owner and Partners related.

The agreement on confidentiality between the Project Owner and the Partners shall be as specified in the Project Consortium Agreement.

Employments in the Project or assignment of work related to the Project shall accompany confidentiality agreement statement.

2.2.13 Essentials in the Project Consortium Agreement

The followings are regarded as essentials in the Project Consortium Agreement in general:

1. Details of agreement signing parties, signing persons, administrators, and activity leaders

2. Short description of the Project in relation to which the agreement is being signed such as project title, project ID, project contract signing date, project contract signing parties, project period, total budget, contributions, total funding, etc., as deemed necessary
3. Agreement validity period and date of entry into force
4. The members of decision making body of consortium and its meeting schedule
5. Agreement to implement the Project according to work plan schedule and budget, with the roles and responsibilities as defined.
6. Agreement on communications strategy between the partners and between the Consortium and the Programme
7. Agreement on Internal Evaluation of the Project
8. Agreement on contributions in Cash or Kind
9. Agreement on distribution of equipments and durables after the end of project period
10. Agreement on distribution of intellectual property and property rights for the intellectual property generated in the Project
11. Agreement on confidentiality and transparency
12. Agreement on the Project result dissemination, such as through publications in media for wider effectiveness of the project
13. Agreement on access to and use of mutual facilities and resources
14. Conditions of withdrawal from the consortium
15. Conditions for addition of Partner to the consortium
16. Conditions for termination of the Project Consortium Agreement
17. Agreement on settlement of disputes among the Partners

The agreement is signed in the number of copies required by the number of partners. The opinion of the Programme on the agreement shall be taken before signing the agreement. A copy of signed agreement shall be submitted to the Programme for final approval.

Note: Refer to the Project Consortium Agreement Reference Section 5.2.

2. 3 Communications, Reporting, Monitoring, and Evaluation

2.3.1 Communications between the Project and the Programme

The projects under RenewableNepal are required to have frequent communications with the Programme office. The Programme shall immediately respond to the communications from the Project that requires the response and shall give an indication of time by which the matter related will be addressed. Similarly, the Project shall act to the communications from the Programme. Any problems with the project should be immediately reported to the Programme office in order to find the timely measures. The Primary means of communication should be e-mail. Scanned documents and other documents may be sent by e-mail. For immediate response need, telephone may be used. Postal services, courier services, and in-person visits may be used as needed. Use of such method shall be informed in advance. All communications shall normally be between the Project Leader and/or the Project Administrator and the Programme.

Communication between the Project Owner and Partners shall be frequent and shall be according to the communication methods specified in the Project Consortium Agreement.

Projects are encouraged to communicate with each other, to share the experience of running the projects.

2.3.2 Visibility of the Project

The Programme encourages projects to make the Project and the Programme visible (in general or specialized media, local seminars/conferences, in technical communities, on internet, etc.). In the visibility action, **the Project must indicate support from RenewableNepal and state the cooperation between KU, SINTEF and NORAD**.

Annual Workshop will be organized by RenewableNepal, normally matching with the date of Annual Meeting. The Projects are required to participate in the workshop, presenting the project and progress, discussing problems, discussing ways to overcome problems, etc.

2.3.3 Reports from the Project

All the reports from the projects required by the Programme must be submitted timely. The reports are submitted by the Project Administrator or the Project Leader in proper communications with the Partners and contributions from the Partners. The following reports are required.

1. Mid-Year Progress Report (in short, without documentary evidences) within FIFTEEN DAYS of the end of six month from the Date of Start of Project Activity for the Project Year, responded by the Programme in FIFTEEN DAYS.
2. Annual report within THIRTY DAYS from the Date of End of the Project Activity for the Project Year, responded by the Programme in THIRTY DAYS.
3. Final Project Report within THIRTY DAYS from the Date of End of the Project Activity, responded by the Programme in THIRTY DAYS.

The Project is closed in approximately TWO MONTHS from the date of submission of the Final Report with one final financial transaction between the Programme and the Project, and the transfer of ownership of equipments and other durables procured from the majority Programme Funding to the Project Owner or Partners.

The Programme will provide in advance the formats for budgeting, keeping and reporting accounting details and format for time-sheets. The technical report and other part of the financial reporting shall be formatted as deemed suitable by the Project.

Following articles define the general contents of various reports.

2.3.3.1 Mid-Year Progress Report (Interim Report)

The content of Mid-Year Progress Report shall be as follows, in brief, as applicable to the period.

1. A description of actual outputs compared to planned outputs (as defined in the work plans)
2. A summary of the use of funds compared to the budget
3. An assessment of the efficiency of the Project (how efficiently resources/inputs are converted into outputs)
4. An explanation of major deviations from plans
5. An assessment of the need for adjustments to work plans and schedule
6. An assessment of problems encountered and risks including actions for risk mitigation
7. An assessment of achievements in relation to Purpose of the Project

2.3.3.2 Annual Report

The content of Annual Report shall have two parts.

1. **Technical Report containing**
   a. A description of actual outputs compared to planned outputs (as defined in the work plans) for the Project Year
   b. An assessment of the efficiency of the Project (how efficiently resources/inputs are converted into outputs) for the Project Year
   c. An explanation of major deviations from plans in the Project Year
   d. An assessment of the need for adjustments to work plans and schedule in the Project Year and in the next Project Year.
   e. An assessment of problems encountered and risks including actions for risk mitigation in the Project Year
   f. An assessment of achievements in relation to Purpose of the Project
   g. The Work Plan and Schedule for the Next Project Year
   h. Documentary evidences of technical outcomes of the year indicating both "Confidential" and "Public" documents

2. **Financial Report containing**
   a. A detailed report on expenditures and contributions compared to the budget with all the certified copies of documentary evidences attached arranged according to the budget headings and sub headings in chronological order of expenses, for the Project Year.
   b. The auto-generated project account report for the Project Year
   c. The auditor's report for the Project Year
   d. An assessment in relation to the budget and actual expenditures
   e. The detailed Budget for the Next Project Year and with Programme Funding requirements considering the actual expenditures from the Previous Year Funding
   f. An updated summary budget for the Remaining Project Years indicating expenses in the previous years.

2.3.3.3 Final Report

The content of Final Report shall have two parts.

1. **Technical Report containing**
   a. A description of actual outputs compared to planned outputs for the entire Project Period
   b. An assessment of the efficiency of the Project
   c. An assessment of achievements in relation to Purpose of the Project
   d. An assessment of the achievements in relation to the Programme Objectives
      i. Contribution to the industrial development
      ii. Commercialization aspects of the Products and/or Services developed
      iii. Competence development at the research institutions
      iv. Contribution aspects to socio-economic development of Nepal with positive environmental effects
      v. Contribution in promoting involvement of women in research
      vi. Transfer of knowledge and expertise from Norway to Nepal
      vii. Overall competence developed for R&D project design and implementation in the organizations involved
      viii. Future cooperation among the partners
      ix. Long term and multiplier effects of the project

e. An assessment of effectiveness of the Programme Funding mechanism and procedures of implementing R&D Project under the Programme Framework
f. List of verifiable outcomes/outputs of the project
g. Ownership transfer request to the Programme for Durables indicating their current book value and expected further life.
h. Documentary evidences of technical outcomes of the Project indicating both "Confidential" and "Public" documents

2. **Financial Report containing**
   a. A detailed report on expenditures and contributions compared to the budget with all the certified copies of documentary evidences arranged according to the budget headings and sub headings in chronological order of expenses, for the Final Project Year.
   b. The auto-generated project account report for the Final Project Year ready for closure with one final transaction between the Project and the Programme.
   c. The auditor's report for the Final Project Year
   d. Summary of Original Budget vs. Actual Expenditure in every year under different headings and for entire period
   e. An assessment of effectiveness of the financial procedures in the Project

2.3.3.4 Project Account Audit Report

The Project Account in both Nepal and Norway shall be audited annually, preferably by an independent auditor. The account audit report shall be submitted along with the annual financial report. The audit shall be carried out in accordance to Nepalese or Norwegian audit standards, as applicable. The audit report normally states the auditor's opinion/findings as to

1. Whether the financial statements are present fairly, in all material respects, the Programme's cash receipt income and expenditures as well as the cash/bank/financial position in accordance with an acceptable financial reporting framework
2. Whether the audit has uncovered any material weaknesses in relevant internal controls
3. Whether the audit has uncovered any illegal or corrupt practices
4. Whether cash receipts/income and expenditures are properly accounted for
5. Whether the Project is reflected in the budgets and accounting of the organization
6. Whether appropriate internal controls to counteract illegal and corrupt practices have been established and complied with
7. Whether the accounting is in line with the requirements set by the Programme
8. Any other report from the auditor significant to the implementation of the Project

2.3.4 Monitoring and Evaluations of the Project

2.3.4.1 Access to Monitor and Audit

At any time during normal working hours, the Programme or its appointed representative shall have access to the premises of the Project Owner and Partners, on an advance notice, to monitor the Project Progress and to audit the Project Owner or Partner accounts related to the Project. The Project Owner or Partner shall render the assistance necessary.

2.3.4.2 Evaluations

Any ongoing project will be evaluated by the Programme on each of the evaluation criteria with the following 10 point marking system.

Table 5: Evaluation Criteria of the Programme

Quality	Exceptional	Very Good	Good	Fair	Poor	Worse
Marks	10	8	6	4	2	0

The ongoing projects under the programme are evaluated generally under the following criteria.

1. How effectively the original objectives are kept intact or made more effective
2. How effectively the milestones promised are achieved
3. Quality of reports and timely submission of reports
4. Plan vs. implementation of the project
5. Budget vs. expenditures
6. How effectively the guidelines from the Programme are followed
7. Overall development of the Project

The evaluation will be based on reports and monitoring by the Programme office or the Steering Committee Member of the Programme, or by an Independent Evaluator designated by the Programme. Poor evaluation results may result in withholding of remaining disbursements or termination of the contract. Before such decision is taken, the Programme office will meet the project Administrator and the Project Leader and may suggest corrective measures. The final decision will be taken in consultation with the Steering Committee of the Programme.

All the Projects with Project Duration of more than 2 years will have a thorough review by the Programme in the middle of the Project Period.

2.4 Changes in Project Plan vs. Implementation

2.4.1 Project Administrator

Change of the Project Administrator shall be immediately reported to the Programme in writing, including appropriate justification for the change and specification of the date of commencement of duties. The change should be reported by the Person Signing the Contract or the Head of the Project Owner organization. The change of Project Administrator is not regarded as a major change in the Project by the Programme. If the Programme has not responded to the request for the change of the Project Administrator within **THIRTY DAYS**, the change is considered approved by the Programme.

2.4.2 Project Leader

Change of the Project Leader is regarded as the major change by the Programme. Any foreseen or sudden change shall be reported immediately with justification and request for a new project leader or request for the termination of the Project. Requests for a new project leader must be submitted in writing by the Project Administrator with proper justification and consequences of the change and it must include the CV of the new proposed leader as well as the desired date of commencement of duties. The Programme has to respond within **THIRTY DAYS** in writing about the acceptance or rejection of the request. If the Programme rejects the request for the change of the Project Leader or accepts the termination request, the Project should enter into the

Project Termination Procedure and the Project should be closed within **THREE MONTHS** officially. The Programme decision cannot be challenged in this case.

2.4.3 Partner Activity Leader

Change of the Partner Activity Leader is regarded as a minor change and could be made according to the convenience of the Partner organization, unless specified otherwise in the Project Consortium Agreement. The change should be notified to the Programme AS SOON AS the Consortium agrees to the change.

2.4.4 Project Consortium Composition

Withdrawal of an existing partner from the Consortium will be regarded as a major change, unless the withdrawing partner is of duplicate type. Primary partner types are: a research institution in Nepal, an industry in Nepal, a research institution in Norway, an industry in Norway; all other additional partners are regarded as duplicate of one of these. The withdrawal must follow the procedures and the conditions specified in the Project Consortium Agreement. The withdrawal from partnership by a Partner organization must be reported IMMEDIATELY to the Programme in writing with proper justification, consequences, changes in the work plan, changes in the budget, and steps that will be taken to minimize the adverse effects to the Project. The Programme will respond to such reporting within THIRTY DAYS of the reporting. The Programme may terminate the Project on this ground or change the funding allocation to the Project. The decision of the Programme cannot be challenged.

Partners may be added into the Project Consortium with an agreement between the Programme and the existing Project Consortium to make the Project more effective and efficient. The request for addition should be made to the Programme accompanied with the updates in the Project Consortium Agreement, the roles and responsibilities of the new partner, and justification. The request should also accompany changes in the overall work plan and the budget. Addition of partner shall not be dependent on the increase in the Programme funding to the Project. Additional funding request may however be made referring to the Programme Funding Limits specified to the different category of partnership composition by the Programme. Additional funding request may be considered only if the Partnership Composition changes and there is significant change in the work plan. The Project Administrator or the Project Leader shall make such request at the time of submission of one of the reports (mid-year or annual). The Programme will respond to such request along with the response related to the Project Report, which shall generally be in THIRTY DAYS time. The change will not be effective without the response from the Programme in writing.

2.4.5 Project Consortium Agreement

The Project Consortium can update the Agreement with an aim of making the Project more effective and efficient. The updates shall be reported to the Programme and the Programme will respond within THIRTY DAYS for such update. The updates are effective after the endorsement by the Programme. If the Programme does not respond within THIRTY DAYS, the updates are regarded as accepted.

2.4.6 Project Work Plan and Schedule

The Project Leader shall report any change or update in the Project Work Plan and Schedule at the time of reporting to the Programme, which forms an integral part of the report. The updates are effective after the endorsement by the Programme. The changes reported forms an integral part of the Project evaluation.

2.4.7 Budget

The Project Leader shall report any change or update in the Project Budget at the time of reporting to the Programme (Annual), which forms an integral part of the report. Changes in the budget should accompany change in the Work Plan and Schedule. The Programme will respond within THIRTY DAYS. The updates are effective after the endorsement by the Programme. The changes reported forms an integral part of the Project evaluation.

2.4.8 Budget vs. Expenditure

The Project Leader shall submit Budget vs. Expenditure report at the time of reporting to the Programme, which forms an integral part of the report. The Programme will consider a deviation in actual expenditure vs. budget only annually. Major deviation of actual expenditures from the budget in each of the 5 main budget headings (deviation of more than ±10% of the amount allocated within the yearly budget in a particular heading) shall be properly justified. For limits in the deviations between the budget and the actual expenditure for any project period and entire project duration, refer to the limits specified in this document. The Programme will respond within THIRTY DAYS.

2.4.9 Extension of Project Duration and Scope

No project duration can extend beyond August 2013 as under the current Programme framework all projects must be closed by 31 October 2013 at latest.

Any application for project period extension shall accompany proper justification for the reasons beyond control of the Project Owner and the Partners. If for some reason the budget is unspent at the end of awarded project period, then the project period may be extended upon request from the Project Owner for the duration requested, normally up to 6 months. Such decision will be based upon the approval of technical report and financial report for the completed period and Work Plan and updated budget for the extension period. No additional funding is provided for such extensions. The Programme however has the authority to terminate such projects and ask for the return of unspent funds.

The project scope may be extended with an agreement between the Programme and Project Consortium. Appropriate updates in the Project Work Plan and Budget may be made.

2.4.10 Force Majeure

Neither the Programme, nor the Project Owner, nor the Partners are in breach of their obligations under the Project Contract and Project Consortium Agreement if the performance of the Project has been delayed or prevented by force majeure. It is considered force majeure if fulfilment of the Project Contract or Project Consortium Agreement be prevented or delayed by reason of circumstances that the parties could not have anticipated when entering into the Contract/Agreement or which could not have been avoided by reasonable means, such as illness, dismissals, natural disaster and strike. Delay in or prevention of project activities due to a Force Majeure shall be notified as soon as it has occurred with the information of the cause and the expected period of delay or suspension of activities.

2.5 Obligations of Programme, Project Owner, and Partners

2.5.1 Obligations of the Programme

The following are the basic obligations of the Programme in relation to the Projects:

1. Immediately communicate changes in the Programme Framework of operations that may affect the projects and their executions
2. Demand reports from the Projects
3. Responds to reports by the time limit
4. Monitor and evaluate the project, and communicate evaluation results
5. Provide all the eligible and the Programme approved cost of execution of R&D Project from the Date of Start of the Project Activity to the Date of End of the Project Activity as defined by the Project Duration, in accordance to the approved Work Plan, Budget and the Expenditure Reports, not exceeding the total funding limit set in the decision made by the Steering Committee of the Programme on regarding the R&D Project
6. Communicate any decision/instruction of the programme that influences the executions of the Project to the Project Administrator and the Project Leader

2.5.2 Obligations of the Project Owner

The following are the basic obligations of the Project Owner in relation to the Projects:

1. Execute the Project according to Work Plan, Schedule, and Budget
2. Execute the Project in a way that the Project Objectives and the Programme Objectives in funding the projects are met.
3. Communicate efficiently with the Partners and the Programme
4. Submit reports within time limit
5. Internally evaluate the project regularly
6. Observe proper procedures in the project spending
7. Keep proper project accounting
8. Ensure and enhance the quality of R&D
9. Ensure ethical, transparent and corruption free practice in the project activities
10. Encourage women participation in research and development
11. Ensure good partnership among the Partners and efficient execution of the Project Consortium Agreement
12. Make available reasonable resources and services to the project and partners in relation to the execution of the project in terms of the “Contribution in Kind” or the “Invoice to Project” mode.
13. Provide advance to the Project Account at least for the approved programme funding expenditures planned to efficiently execute the Project when the project account is in short of the funds
14. Bear all the costs related to the Project for the Activities in the Project Owner Organization before the Date of Start of the Project Activity and after the Date of End of the Project Activity till the official closing of the Project between the Programme and the Project, as necessary.
15. Keep track of project expenditures and ensure that the payment in total required from the Program funding lies inside the funding and budgetary limits set by the program.
16. Execute instructions from the Programme and seek assistance from the Programme for Project management.

2.5.3 Obligations of the Industrial Partners

The following are the basic obligations of the Industrial Partners in relation to the Projects:

1. Execute the Project activity in industry according to Work Plan, Schedule, and Budget
2. Ensure that the project activities are directed for industrial development and commercialization of project product and/or services along with the institutional competence development for obtaining future supports
3. Communicate effectively with the Project Owner and other Partners
4. Contribute in reports
5. Make reasonable industrial resources available to the project
6. Participate in internal evaluation
7. Ensure transparent and corruption free practice in project activities
8. Encourage women participation in research and development
9. Take part in financing the project, in cash or in kind according to means, in order to prove genuine interest in the results.
10. Make available fund in advance to project activities in which the industry is the activity leader, if necessary

2.5.4 Obligations of the Institutional Partners

The following are the basic obligations of the Institutional Partners in relation to the Projects:

1. Execute the Project activity in the institution according to Work Plan, Schedule, and Budget
2. Ensure and enhance the project R&D quality
3. Contribute in reports
4. Participate in internal evaluation
5. Ensure transparent and corruption free practice in project activities
6. Encourage women participation in research and development
7. Make available reasonable resources and services in terms of Contribution in Kind or Invoice to Project mode.
8. Make available fund in advance to project activities in which the institution is the activity leader, if necessary.

2.5.5 Liabilities and Insurance of damage to or loss of property, personnel and third parties

Each of the Parties (The Project Owner and the Partners) shall hold the other harmless from loss of or damage to its own and any third party property and personnel, unless the loss or damage has been caused by the other party's negligence.

The Project Owner and the Partners are liable for loss or damage suffered by third parties in connection with the execution of the Project unless the damage or loss is caused by the Programme's requirements to use specific methods and routines or the damage or loss is caused by carelessness or negligence of the Programme.

The Project Owner and the Partners shall take and maintain adequate professional liability insurance as well as adequate insurance against third party liability.

The Programme undertakes no responsibility in respect of any life, health, accident, travel, and other insurance which may be necessary or desirable for the personnel in the Project.

2.5.6 Breach of Obligations

Should one of the parties realise that it cannot meet its obligations or considers the other party to be in breach of its obligations under the Project Contract and the Project Consortium said party shall immediately so inform the other party.

In the event the Programme has any objections to the execution of the Project, the Programme shall so inform the Project Owner in writing and state the reasons thereof.

Should the Project Owner or the Partner be in breach of its obligations then after a reasonable term the Programme shall become entitled to withhold all payments as provided by the Contract until the Project Owner or the Partner has fulfilled its obligations.

Should the Programme be in breach of its obligations then after a reasonable term The Project Owner shall become entitled to cease Work, until the Programme has fulfilled his obligations.

In the event invoices are not paid in due time or invoices in dispute become payable, then the Programme shall not be charged any interest on overdue payment.

2.6 Project Contract Termination

Poor evaluation results of any ongoing project may result in withholding of remaining disbursements or termination of the contract. Before such decision is taken, the Programme office will meet the Project Administrator and the Project Leader and may suggest corrective measures. The final decision will be taken in consultation with the Steering Committee of the Programme. If the termination decision is made, the programme will give 3 month notice to complete termination procedure as follows.

1. Cease the project activities in ONE MONTH
2. Submit final project report within ONE MONTH after ceasing of the Project Activities.
3. Conduct final financial transaction with the Programme
4. Return equipment and durables to the Programme or obtain ownership transfer from the Programme
5. Close the project formally with a declaration by the Project Consortium and by the Project Owner and the Programme.

If a project develops unfavourably to a level that the project cannot be continued, the Project Consortium or Project Owner may ask for the termination of contract with a 3 month notice. Upon approval of such request by the Programme, the project should enter into termination procedure indicated above and will be terminated.

If the programme itself develops unfavourably to a level that the programme cannot be continued, the Programme will terminate all projects with a 3 month notice. The projects will automatically enter into termination procedure indicated above and will be eventually terminated.

The Programme will not take any responsibility for any loss occurring due to Project Termination in the interim to any person or organization.

2.7 Dispute Settlement and Governing Law

2.7.1 Dispute Settlement

The Project and Project Partners will have the responsibility to convey the concerned party any foreseen expected dispute in any action before the action is taken so that the action may be avoided or modified with an agreement between the concerned parties.

Disputes between the Programme and the Project that may arise in connection with the Project or a result thereof shall be settled by private negotiations between the Programme Office and the Project Owner. If such agreement cannot be obtained within a reasonable time period, then the dispute will be handled by the Steering Committee of the Programme at one of the scheduled time of the Steering Committee Meeting of the Programme. The decision of Steering Committee will be final and cannot be challenged further.

Disputes between the Project Owner and Project Implementation Partners that may arise in connection with the Project or a result thereof shall be settled by private negotiations between the Project Owner and Project Implementation Partners, referring to the Project Consortium Agreement. The Programme will not handle the matter related to the settlement of dispute between the Project Owner and the Project Implementation Partners in relation to the Project.

Disputes arising in the Project Implementation due to mismatch between the Project Contract Terms and Conditions, Programme Guidelines, Programme Framework, Project Activity Execution Organization's Rules and Regulations, and Laws of the Country of Activity shall be immediately brought into notice of the Project Leader, Activity Leaders, and the Programme Manager. Such disputes shall be settled by consulting the Administrators of the related organizations and/or professional lawyers/auditors as necessary.

Legal settlement of the disputes shall be on a legal venue as defined by the Programme as appropriate for the settlement of a particular dispute.

2.7.2 Governing Law

The Project Contract and procedures shall be governed by and construed in accordance with the laws of Nepal for activities in Nepal and the laws of Norway for the activities in Norway.

2.8 Amendment to This Terms and Condition and Project Contract

This terms and conditions may be amended at any time by the Programme. The Programme shall send the amended version to the concerned as soon as it is amended. The most recent version of this terms and conditions prevail at all times. In general, amendment to the contract may be made every six months.

Any influence on the activities of any ongoing project due to amendment in this document or other documents related to Project execution shall be effective from ONE MONTH after the date of amendment.

Chapter 3

R&D Project Design for the Framework

3.1. The Concept of Research Based Industrial Development

The following diagram illustrates the concept of research based industrial development, adopted by the programme.

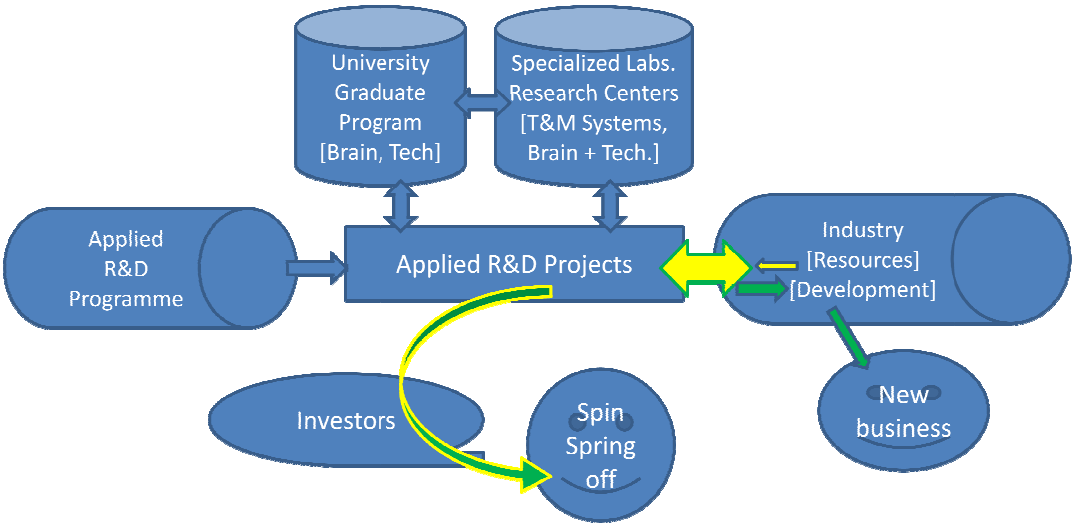

Figure 2: The Concept Diagram for Research Based Industrial Development

In this model, the university and the R&D institutions along with their specialized labs (already available or planned for specific applied R&D) play the vital role of making available qualified researchers and high quality test, measurement, and product/service prototype development systems. Also, the university and the R&D institutions provide qualified leaders who can develop and lead the project, who ensure that the project goals are achieved. Further, these leaders can effectively find expert services (if needed) through their contacts to obtain expert advices and specialized product/service development services that are not available locally. The local industries help such leaders with the identification of industrial, economic, or social problems that can be solved using Applied R&D as a tool. The industries must be having technical objectives that can help to expand their business, make their business more profitable, develop new business for them, and bear their socio-economic responsibility in the country more effectively. The industries must be having resources, although limited, to support applied R&D at universities and research institutions so that their technical objectives with commercial aims are satisfied.

The applied R&D programme such as RenewableNepal can provide various supports, mainly the funding to meet the important Project objectives. The applied R&D programme thus expects that Applied R&D tool is effectively used either to meet industrial/commercial objectives of industries/society or to develop new businesses for the people in the form of spin-off or spring-off companies. Applied R&D, which can prove that innovative ideas or inventions work in reality and are feasible commercially, leads to the development of hardware/software prototypes having tested to a form such that investments can be obtained to put it into a business. In the process, the institutions develop key expertise in terms of specialized HR and labs, to be able to serve for further development and innovations.

3.2. The Applied R&D Project

A project in general is a temporary endeavor undertaken to create unique product, service or result, under a specific budget. If the project is not unique, it is simply a process that can be carried out referring to a specific process manual that defines the steps to accomplish the process. As expected, every project has financial limitations in project funding.

Temporary means that every project has a definite beginning and a definite end. The project generally ends when project's objectives have been achieved, or it becomes clear that the project objectives will not or cannot be met, or the need for the project no longer exists.

Unique means uniqueness of project deliverables, which are products, services or results. Product is a quantifiable artifact. Service means the capability to perform a service. Result means outcomes or documents. If a process in not intended for producing unique deliverable, then it cannot be a project.

A research project is intended to develop knowledge that can be used for social benefits. A development project is intended to develop a new and unique product. As research is integral part of the development project, such kind of project is generally regarded as R&D project. Applied R&D therefore is R&D carried out with predefined application in mind.

Any work effort, given the distinction of being classified as an R&D project by definition, is riddled with uncertainty and all of the accompanying risks. This condition is integral to the project. Otherwise, it wouldn't be called an R&D project.

There are generally two types of R&D projects. Type 1 involves product-oriented R&D projects, which are conducted in support of the development of a new product/service or to facilitate the improved performance of an existing product/service. Type 2 involves information R&D projects, which are initiated to gather data, manipulate data, analyze data, support conclusions, and eventually produce a formal report/method/software-tool for use of private organizations or government agencies. The contents of this R&D generated report/method/tools may well serve as a catalyst for additional R&D targeted at product development or product improvement.

The Programme generally prefers that Type 1 project is carried out under the Programme Framework. Moreover, it may support Type 2 projects as well in limited numbers.

3.3. Applied R&D Product Development Project Life Cycle

Any project has a life cycle that begins with project idea and terminates with the accomplishment of the project objectives.

In a typical Applied R&D Product Development type of project, the life cycle consists of various phases as indicated in Figure 3. The Project Team and particularly the Project Manager shall realize the critical differences between the *Research* and the *Development* Phases.

Project ideas may come every day into our minds. But, they are meaningless, in leading the ideas to Applied R&D Product development type of Projects unless we do some basic research in relation to the ideas.

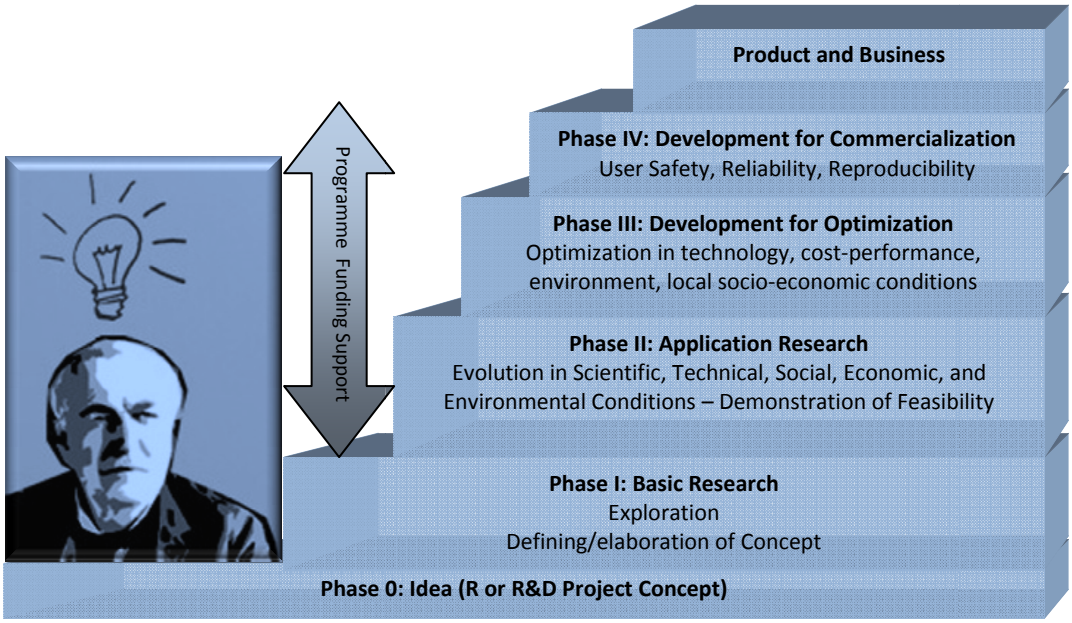

Figure 3: Applied R&D Product Development Project Life Cycle
(Picture: edison_idea.jpg from www.yankodesign.com)

Therefore the Phase I is a very important phase. This phase may be regarded as the **Basic Research Phase**, which consists of explorations into known and unknowns. In this phase, it is generally unknown whether the idea itself is rational or not. The explorations may be complex or simple. Complex explorations usually form the most of a Research/Academic Project. Once this phase is completed, one can expect that the concept of an R&D project is more or less clearly defined.

RenewableNepal Programme framework usually assumes that the Phase I of R&D Project (Basic Research Phase) has been already completed at the applicant or partner institution before applying for the project funding. The Project Leader in our framework is therefore a Key Person who is expected to have undertaken already the Basic Research part and is expected to have a clearly defined concept. The concept shall be in the form of an Objective Tree. If an R&D project has been initiated with an idea to solve an existing problem, it is expected that the Basic Research has already revealed the root causes and clearly defined the Problem Tree. Further, the Basic Research should have also found strategies to handle the problems and clearly defined the Objective Tree for the further R&D. If an idea is regarding new innovation/invention, then also the Programme expects that the Objective Tree is in place. The Programme therefore requires that the project applicant already is with a well defined Objective Tree in place.

The next phase of the R&D Product Development Project is the starting point for the Renewable Programme support. This phase is regarded as the **Application Research Phase**. This phase is the Evolution part. It is the phase of adapting the concept to the real Scientific, Technical, Financial, Social, Environmental, etc. conditions. It is also the phase of demonstrating that the project is feasible in terms of the mentioned/applicable conditions.

The third phase of the R&D Product Development Project is the **Basic Development Phase**. This phase may also be regarded as **Product Development and Optimization Phase**. A prototype is normally constructed at the beginning of this phase, which undergoes optimization in this phase. This therefore involves optimization in terms of technology, cost, performance, suitability to local social and economical contexts, making environmentally clean product, etc.

The final phase, Phase IV, is the **Development for Commercialization/Deployment Phase**. This phase tests the optimized product in terms of user safety, reliability and reproducibility, and

performs additional development/optimization. The products are also developed from the ergonomic point of view. The Products are therefore fine tuned in this phase so that the project product is ready to put into the market.

Every phase requires considerable planning in terms of defining of Work Packages, Core R&D Related Human Resource, Equipment and Supplies, and Other Services. The budget must be carefully prepared corresponding to the Work Package requirements. Financial supports from various sources must be planned accordingly. In the RenewableNepal Programme Framework, the Programme Funding can be a major finance source, while it is necessary that the Project Implementation Partners contribute to the project budget in addition, wherever/whenever is necessary. The project is then implemented according to the Work-Plan, Schedule, and Budget, within the Programme Guidelines. Adaptation and progressive elaboration is the key to make the Work-Plan implemented in a way that the objectives are satisfied.

The Programme therefore aims to support the projects that are ready to be started from Phase II and to be concluded after Phase IV is completed, whatever is the project duration. The industrial partner along with the institutional partner therefore are supposed to be ready for commercial production, put product in market, start spin-off/spring-off companies, attract investors for commercial production, etc. as the project concludes. If this can step can also be achieved within the Programme supported project period, the project will be regarded as a complete project in line with the Programme goal.

3.4. Applied R&D Project Design for the Framework

This section discusses the method or steps that are recommended for the design of R&D Project to suit the RenewableNepal Programme Framework. A project design should basically start with a definition of a Rudimentary Project Framework which encompasses all the necessary basic aspects of the project, from the concept to the implementation details. Once the Rudimentary Project Framework is in place, then it is an iterative optimization to suit the funding, institutional capacity, personnel capacity, and other conditions. A Rudimentary Framework shall consists of the following at least.

1. The Outline or Executive Summary of the Project
2. The Detailed Description of R&D Aspect of the Project
3. The Objective Tree of the Project
    - Project Outcome Objective in Overall (Title Objective)
    - Key Project Objectives
    - Objectives of General Project Activities (Work-Package/Activity Objectives)
    - Short Term, Long-Term, and Multiplier Effects
4. The Project Organization
5. The Methodology of Project Implementation
6. The Work-Packages and Task Descriptions (Work-Plan and Schedule)
7. The Project Budget (Programme Funding and Contributions from Other Sources)

As mentioned, the project design is an iterative optimization and should be carried out only after the Rudimentary Framework is ready, not at the intermediate stages of defining of the basic framework. Optimization is generally done once unconstrained budget is prepared.

3.4.1 The Outline of the Project

This serves as the executive project summary. This section shall describe, in brief, the followings.

- The background for the origin and the evolution of the project concept
- The statement of problem or intent of invention or innovation

- How, in effect, the project will solve the problem or lead to invention or innovation
- What are the major activities required to solve the problem or to effect the intended invention/innovation?
- What should be the tentative duration of the project in mind?
- What are the anticipated effects (short term, long term, and multiplier)?
- How the project effects are anticipated to contribute in social, economical, and industrial/commercial development in environmentally sustainable manner
- What are the major risks associated with the success of the project and what may be the risk mitigation measures?
- Why partnership? Who are the partners? What would the partners offer for the Project? How are the activities coordinated amongst the key stakeholders (partners)? Why the participating organizations (including key personnel) should be regarded as a competent/capable team to execute the project?
- What are the other major resources required for the project execution in addition to the resources that the partners can offer?
- Why a particular external funding is instrumental for the project

Most often, the above information may be adequate for giving an overall picture of the project. Moreover, the Programme Framework demands details so that the project is more visible, the funding is utilized effectively, and the execution of the project is smooth from the moment of start. So the design shall have the project execution details already in place.

3.4.2 The Detailed Description of the R&D Aspect of the Project

The Programme assumes the project has already completed the **Basic Research Phase**, which consists of explorations into known and unknowns. Therefore, it is imperative that the Programme does not intend to fund the project that just describes the idea, but the R&D associated with it is remaining to be explored and realized well. Hence, the detail of R&D aspect needed to execute the project shall be clear to the project and the programme.

This section of the Rudimentary Project Framework therefore describes the overall R&D associated with the project. It starts with the background for the origin and evolution of the project concept in details. The statement of problem or intent of invention or innovation is then elaborated. Technology and literature survey summaries are then presented. The further research needs are then outlined. The major resources needed for the research are mentioned. Then, the development steps are listed and described in brief. The major resources needed for the development works are also mentioned. Note that the development work may have two phases; one is for technology optimization and other for commercialization. Please refer to Figure 3 for the reference.

Therefore, this section of the framework, addresses the question in detail; “How the R&D project will solve the problem or lead to invention or innovation” that ultimately results in commercialization or deployment of the project product in the market or society.

3.4.3 The Objective Tree of the Project

Once, the draft content of section 3.4.1 and 3.4.2 are ready, the project design is ready to define the Objective Tree for the project and with chosen appropriate strategy/methodology to achieve the objectives.

The diagram of Figure 4 illustrates the Objective Tree of the R&D Project, which not only should show the objectives of the project but also indicate the strategy to achieve the key objectives.
In the diagram of Figure 4, the objectives are arranged in various levels.

The lowest level is the Work-Package (WP) objectives. These reflect the R&D Work Breakdown Structure (WBS) of the project. The WBS is a deliverable-oriented hierarchical decomposition of the work to be executed by the project team, to accomplish the project objectives and create the required deliverables. The WBS divides the project work into smaller and manageable pieces of work. These work-packages should be such that they can be scheduled, cost/resource estimated, monitored and controlled with ease. For each work-package, tasks can be defined, and responsibility and resource can be allocated for completing the task. Work package interactions are needed to be defined and the inter-dependency must be appropriately considered.

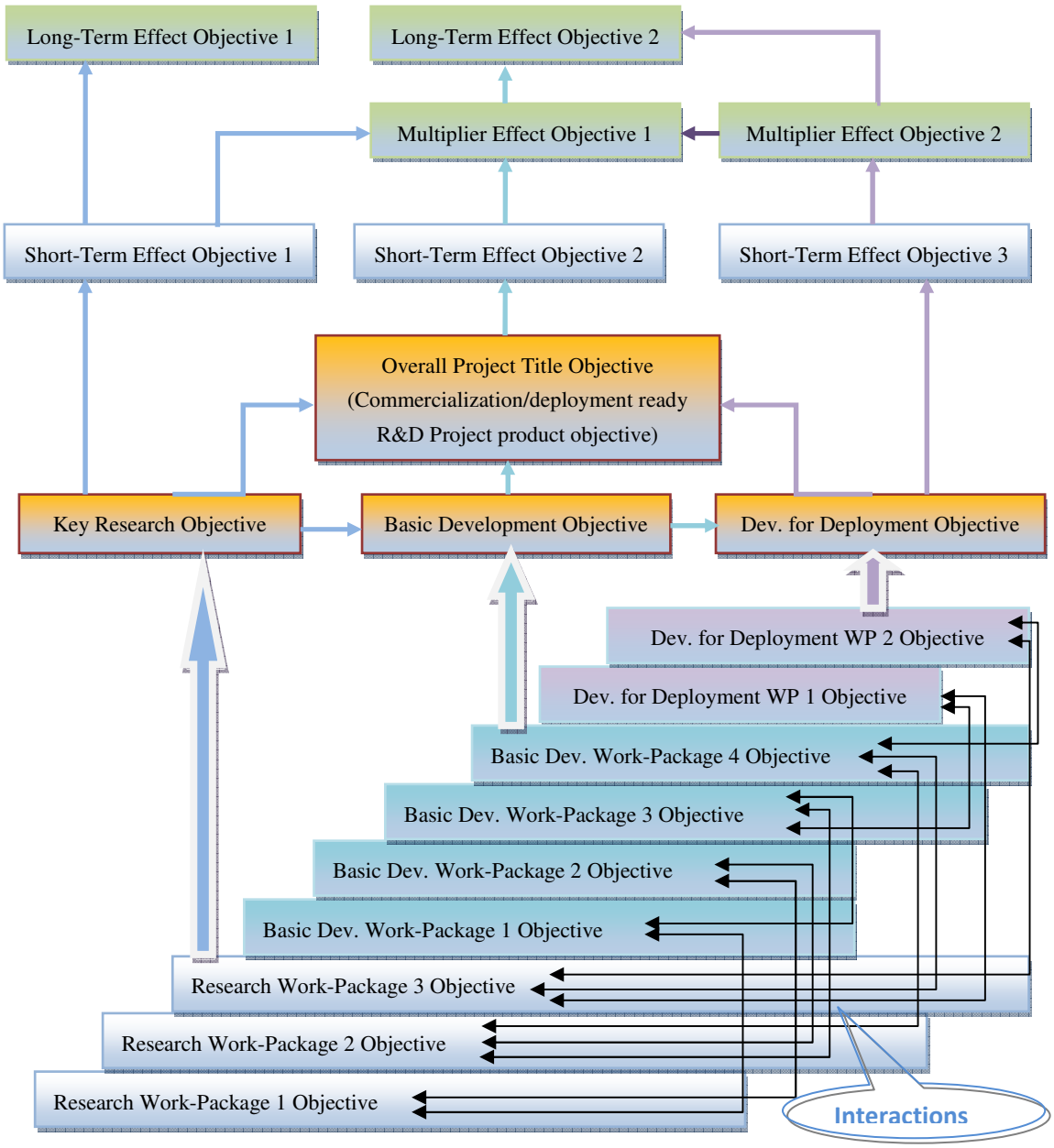

Figure 4: The Objective Tree for the Project under the Programme Framework

In addition to the R&D work-packages, there are other necessary work packages associated with the overall technical and administrative management of the project. These are:

1. Project start-up and infrastructure setup (Scheduled at the beginning of the project)
2. Project closing and appraisal (Scheduled for the end of the project)
3. Project administration, communication, coordination, and day-to-day management (Scheduled for the entire project duration with meetings scheduled at appropriate intervals)
4. Project monitoring and evaluation (Scheduled at appropriate intervals)

The next level in the objective tree is the key objective level. In this level, the key objectives of the Application Research activities, Basic Development activities, and Development for Deployment/Commercialization activities are listed. The R&D project under the Programme framework must at least have three key objectives.

The next level in the objective tree is the Overall Project Objective. This is also regarded as the title objective. The project title shall indicate this objective.

The next level is the Short-Term Effect level. In this level, the short term effects of project are listed. The short term effects may be considered as the direct positive consequences. These may be defined for the research and development works separately or in overall. These effects shall indicate the project milestones in terms of deliverables of the project. Therefore, these effects shall have an anticipated outcome schedule.

The next level is the Multiplier Effect level. Applied R&D should have some multiplier effect so that the project outcome is utilized by many users, project of similar kinds are replicated, and the effect of the project in consideration is multiplied in the society or market. This is anticipatory.

The highest level is the Long Term Effect level. This level indicates the socio-economical and positive environmental contribution that the project can make in long term. In the Programme framework, this should indicate the overall contribution in the research based sustainable industrial development effect in Nepal due to the project. This is also anticipatory.

3.4.4 The Project Organization

The Hierarchical Organization of the Project and interaction between various physical/logical entities under the Programme framework is illustrated in the diagram of Figure 5.

The Project Organization diagram is described as follows.

The Project Owner is the main organization responsible for the Project. The Project Owner is the Principle Project Applicant at the time of applying for project funding. If the funding is awarded, a Project Contract is signed between the Project Owner Organization and the Programme. In all project related matters, the Project Owner is represented by the Head of the organization or a top level authority of the organization authorized by the Head of the organization.

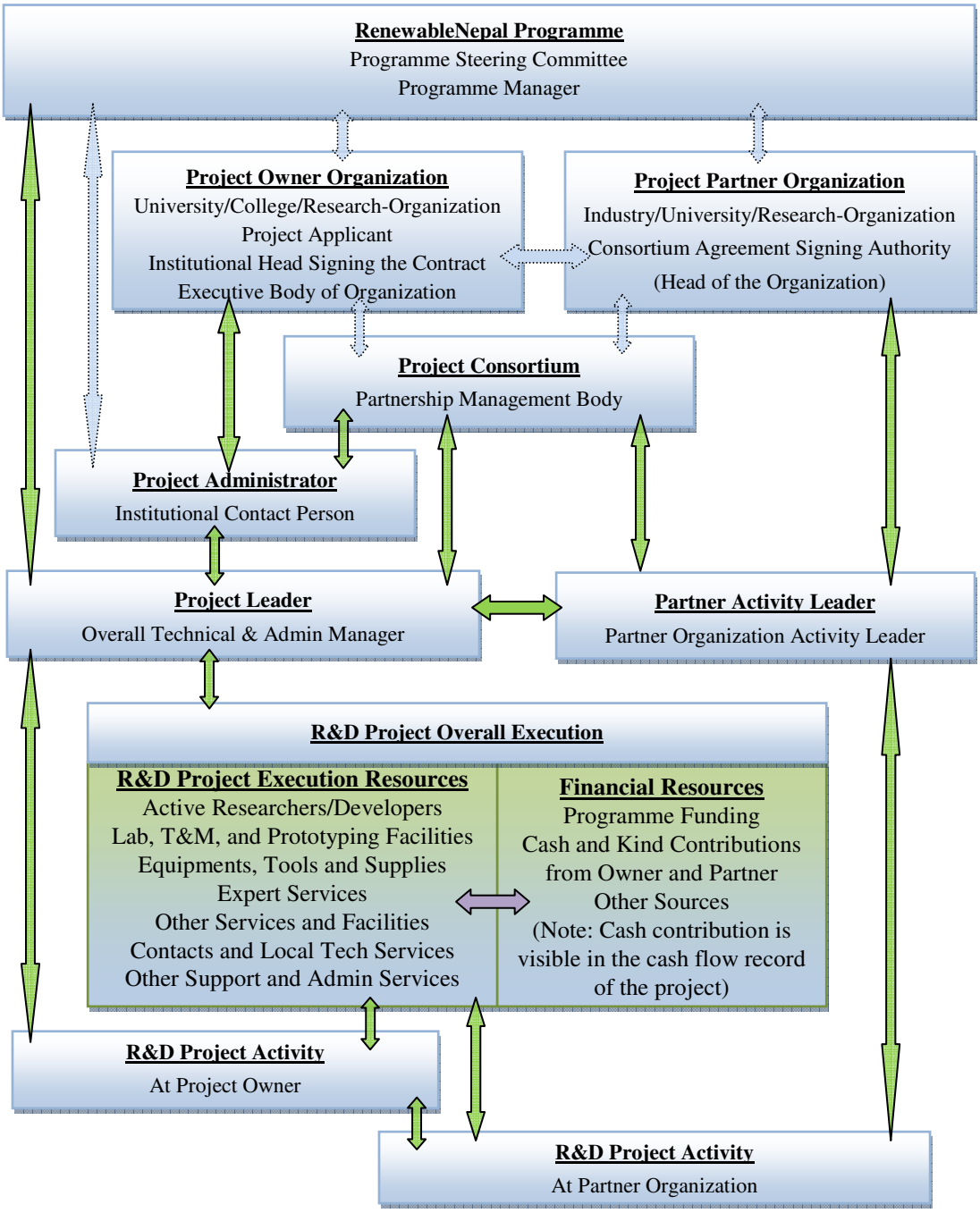

Figure 5: The R&D Project Organization Diagram

Project Administrator is an administrative authority in the Project Owner organization, a person responsible for a division, in which the Project is to be implemented. The Project Administrator is an interface between the Project and the Project Owner organization executive body. The Project Administrator facilitates the Project related decision making in the Project Owner organization in relation to the Project Owner organization's rules and regulations. The Project Administrator takes up the role of Institutional Contact Person, unless specified otherwise. The Project Administrator is an integral part of the Internal Evaluation of the Project progress and advises the Project Leader for efficient execution of the Project plans.

The Project Partner Organization is an organization, in collaboration with which, the project is to be implemented. The partner organization is represented by the Head of the Organization or a top level authority of the organization authorized by the Head of the organization. There can be multiple partners in a project. Project Partner implements/executes part of the Project activities according to the Project Consortium Agreement and Work Plan, Schedule, and Budget.

The Project Leader is the person who primarily designs the project and implements it on behalf of the Project Owner and the Partners. The Project Leader is the main responsible for all technical and administrative activities within the Project. The Project Leader is the main link between the Programme and the Project for all Project related communications. The Project Leader has the authority to employ project staffs and authorize all financial transactions related to the Project and delegate the authority to any Activity Leader. The Project Leader is also expected to be an Expert in the project R&D area, with relevant qualifications. **The Project Leader must be a full-time staff (preferably permanent and leading or co-leading a research group or laboratory) of the Project Owner and must at least have masters degree (preferably in the relevant field) with some research and research project management experience**. The Project Leader is the single most important person for the Project.

Partner Activity Leaders are key persons designated to lead project activities in partner organizations. Activity leaders are also considered to be expert in the project subject matter and/or project handling. The Activity Leader of the Partner organization is responsible for all technical and administrative activities in the Partner organization in relation to the execution of the Project. The Activity Leader of the Partner organization will regularly communicate with the Project Leader for the Project related matters. The Activity Leader of the Partner organization is an interface between the Project and the Project Partner organization executive body. The Activity Leader has the authority to employ project staffs and authorize all financial transactions related to the Project in the Partner organization, with the permission from the Project Leader.

The Project Consortium comprises the representatives from the Project Owner and the Project Partners. In the framework, the Project Owner must be at least represented by the Project Administrator and the Project Leader. Similarly, the Partner Organization must be at least represented by the Partner Activity Leader. The Consortium is the main body to manage the partnership necessary to implement the project and make necessary partnership related decisions. Once the Project is awarded by the Programme and a contract is made between the Programme and the Project Owner, a Project Consortium Agreement is signed between the Project Owner and the Partners. It is an agreement to efficiently execute the Project in a collaborative framework and share the benefits of the Project. The agreement defines the roles and responsibilities of Partners including the Project Owner, communications methods, method of sharing the physical and intellectual properties generated in the Project, method of resolving disputes, overall partnership management, contribution requirements, etc. in relation to the collaboration regarding the implementation of the Project. The Project Consortium Agreement is signed by the Project Administrator on behalf of the Project Owner organization and by designated persons of the Partner organizations.

In the organization diagram, the Project Leader primarily allocates the Project Execution Resources to undertake the Project Activities at the Project Owner and Partner Organizations. The Project Leader manages the mobilization of the funding. The Project Leader in consultation with the Partner Activity Leader allocates the resources for activities in the Partner Organization. The Project Leader is the main supervisor of

activities at the Project Owner and the Partner Activity Leader is the main supervisor of the activities at the Partner Organization.

3.4.5 The Methodology of Project Implementation

The methodology section generally describes in detail how the project will be implemented. All the previous sections were answering the questions "Why?" and "What?" This section describes the questions "HOW?" in terms of methods/strategies. This is very important part of the project design. This section therefore defines the strategies of project implementation and the roles of various key resources.

3.4.5.1 R&D Methodology

The R&D Methodology section describes "How the R&D works will be carried out and coordinated." As indicated previously in the Objective Tree, there are three phases of R&D: Application Research Phase, Basic Development/Optimization Phase, and Development/Optimization for Commercialization/Deployment Phase. It is therefore important to describe the strategies to be employed to implement these phases, which mainly involves strategies to use key resources to produce the desired R&D results. The interdependences of these phases and overlapping of work-package activities of various phases must be clearly understood and described.

This section thus generally describes the following in an elaborated form, within the project R&D scope. Some items may be out of scope of the project and some items may be needed to be added.

- The Kind of method to be used in the Application Research
  - Literature survey and use of literature survey resources
  - Technology survey and use of technology survey resources
  - Field background data collection and processing and inferring tools and methods
  - Laboratory experiments and experimental data processing and inferring tools and methods
  - Software simulation tools and methods
- The Kind of method to be used in the Basic Development
  - Method and tools for computer aided design of components/parts/sub-systems/system-prototype
  - Method and use of tools for the design and physical construction of components/parts/sub-systems/system-prototype
  - Method of testing of components/parts/systems
  - Method for validation of design methods through experiments/testing
  - Method for technology optimization
  - Method for cost-performance optimization
  - Method for assessing possible socio-economic and environmental impact
  - Method for assuring positive socio-economic and environmental effects
- The Kind of method to be used in the Development for Commercialization
  - Method for assuring general safety
  - Method for testing the reliability
  - Method for testing in real operating environments
  - Method for assuring that the product is user friendly
  - Method for testing for reproducibility
  - Method to produce commercial specification, operating-manual, safety-instructions, maintenance-manual, etc.
  - Method for standardization of the product for use in the real world

3.4.5.2 Methodology for General Project Management

This section describes in general how the project and its various aspects will be managed in overall. This may consist of the following in an elaborated form.

- The method for project procedural infrastructure setup and project startup
- The method for overall project administration and decision making
- The partnership cooperation management strategy for good partnership
- The overall project communication strategy
- The method for day-to-day management of project activities
- The method for financial management
- The project activity scheduling, coordination, assessment, and adaptation strategy
- The project progress monitoring and internal evaluation methods
- The method to ensure impartiality, transparency, and avoidance of corruption
- The method to manage intellectual property, confidentiality, and ownerships of assets generated by the project
- The strategy for project visibility and outcome dissemination for public benefits
- The strategy to contribute in socio-economic, industrial, research, academic, etc. development through the project
- The project closing and appraisal method

3.4.5.3 Summary of the Roles and Responsibilities of the Partners

In this section, the anticipated roles and responsibilities of partner organizations are summarized. A three partner project is considered in a sample workout of project design: NPRI (P0)- a Nepalese Research Institution as Project Owner/Applicant, NPEI (P1)- A Nepalese Energy Industry as Main Industrial Partner in Nepal, and NORI (P2)- A Norwegian Research Institution as Main Research Institution Partner in Norway. It is generally necessary to list out the availability of resources at the project implementation partners and mode of their availability.

3.4.5.4 Summary of the Roles and Responsibilities of the Key Human Resources

In this section, the anticipated roles and responsibilities of key human resources in the partner organizations are summarized. Additional key human resource requirement is also estimated.

3.4.5.5 Summary of the Role of other Major Resources

In this section, the roles of other major resources of the project (Equipment, Test & Measurement Facility, Computers, Machines, Prototyping/Production Facility, Prototype Systems, etc.) are summarized. The resources availability, mode of availability, and additional resource requirements are elaborated.

3.4.6 The Work-Packages and Task Descriptions (Work-Plan and Schedule)

The next step in the project design is the Work-Package (WP) detailing and listing of tasks. In the project design framework of the Programme, the complete Work-Packages and Task Descriptions will indicate the overall major Work-Plan and Schedule of the project. With the Objective Tree, the Project Organization diagram, the Methodology for Project Implementation, the Roles and Responsibilities of Partner Organizations, the Roles & Responsibilities of Major Human Resources, and Roles of other Major Resources

already defined, the Work-Plan and Schedule may be obtained. It will be difficult to define the Schedule of Resources and estimate the Direct Cost of Activity in the beginning. Only a crude estimate may be made at the moment and then the rest may be left for the final optimization exercise.

The Work-Plan and Schedule is Illustrated in the Table 7 for one Work-Package and associated Task Descriptions. It is recommended that one WP spans one page so that it is manageable, and the updating/following-up of work-plan can be effective.

The Work-Package description gives the indication of dependencies of one Work-Package to another. The dependency will give an indication of total duration required to implement the originally conceived project. The Work-Package duration overlapping is also obtained. Graphical Task and Resource Schedule with schedule of each major actions/tasks and resource use will normally make it easy to define the project duration requirement.

In the sample project design, the total duration has been assumed as 2 years, consisting of the following arbitrary WP schedule with virtual dates.

1. Project start-up and infrastructure setup- one month (01/01/01 to 30/01/01) – this must finish before others can be started.
2. Research Work-Package 1 - six month (01/02/01-30/07/01)
3. Research Work-Package 2 – six month (01/05/01-30/11/01)
4. Research Work-Package 3 – one year and four months (01/07/01-30/10/02)
5. Basic Dev. Work-Package 1 – six month (01/04/01 – 30/09/01)
6. Basic Dev. Work-Package 2 – four months (01/06/01 – 30/09/01)
7. Basic Dev. Work-Package 3 – six months (01/08/01 -30/01/02)
8. Basic Dev. Work-Package 4 – one year (01/11/01- 30/10/02)
9. Dev. for Deployment WP 1 – six month (01/01/02-30/05/02)
10. Dev. for Deployment WP 2 – eight months (01/03/02-30/10/02)
11. Project closing and appraisal- one month (01/11/02 to 30/12/02) - all other Work Packages must terminate before this can start.
12. Project administration, communication, coordination, and day-to-day management
13. Project monitoring and evaluation – every six month

Virtual date 01/01/01 indicates the first day of project start and 30/01/01 indicates the last day of first month of first project year

In the dependency, WP0.2-FS- means WP0.2 must finish before this can be started, WP0.2-FF- means WP0.2 must finish before this can be finished, WP0.2-SS- means WP0.2 must start before this can be started, and WP0.2-SF- means WP0.2 must start before this can be finished.

Table 6: Work-Package (WP) and Task Descriptions for one Work-Package

WP or Activity Code:	Activity Title:	Activity Leader:	Start Date:	End Date:	Overall WP/Activity Objective:	Direct Cost of Activity
Enter code serially starting with start up activity	enter the title	Enter the name	Enter the date	Enter the date	Enter from the objective tree	If could be estimated

Major Actions/Tasks		Task Schedule (Virtual Dates)			Outcome and Quantity/Milestone	Assumption for effective completion of task
Code	Task Statement or Short Description	Start	Complete	Dependency/Remark		
WP1.1	Statement	01/01/01	30/01/01	WP0.1-FS	Outcome of task	Major assumption
WP1.2						
WP1.3						
WP1.4						
WP1.5						

Major Resources to be used in the WP		Resource Use Schedule (Virtual Dates)			Cost of Resource	Remarks on resource security etc.
		Start	Complete	Use intensity/remarks		
Expert:	enter name	01/01/01	30/01/01	3 hrs per week, 12 hrs total		
Researcher:	enter name					
Other staff:	Enter name					
Equip Tools Material	Mention major ones with schedule of use					
Process Facility	Local workshop	01/01/01	07/01/01	One week		Confirm
Other Resources:	Major ones with schedule of use					

3.4.7 The Initial Project Budget

The design of cost plan or budget is one of the major parts in the project design. Obtaining initial project budget is the final part of the project design to obtain a complete Rudimentary Project Framework in place. Once the initial budget is obtained, then the optimization of whole project framework may be carried out. The initial project budget shall consider no constraints on project implementation.

3.4.7.1 The Key Resource List

Before the initial budget is obtained, it is desirable that a list of key resource requirements is obtained from the WP.

The key resource list indicates the requirements of key resources for the execution of the project and their availability from various sources. It will therefore start with the outline of the overall major requirements of resources for the project execution or execution of the Work-Packages (R&D as well as start-up, closing, day-to-day management, monitoring, evaluation, etc.). It will then make an initial remark on what could be available to the project from the Project Owner and the Partner organizations, either paid for the use of resources from the Project Account or as organizational Contributions in Cash/Kind. It will then consider the estimation of the additional resources requirements to execute the project; the Programme Funding, Contributions in Cash/Kind from the other sources. It should therefore consider the elaboration of availability of Project Execution Resources and Financial Resources block of the Project Organization diagram.

Since the Programme Funding is the principal funding source for the execution of the Project under the Programme framework, it is natural to start with an estimation of expected Programme Funding to cover the unavoidable expenses for the use of the available resources and for getting additional resources for the execution of the Project. Under the Programme Framework, the Project Design should consider additional resources for the institutional R&D competence development for industrial support in the long run. The Programme also emphasizes on creation of overall R&D HR competences in the society through creation of new R&D jobs. Therefore, from the Programme's perspectives, Researchers/Developers, Test & Measurement Equipments and Setups, Prototyping Facilities, and Expert Services are the most important key resources and majority funding shall be spent on these resources.

The Key resource list is illustrated in Table 7. The following legend shall be referred.

Legends: PF- Programme Funding, CC- Cash Contribution visible in the cash flow of Project, KC: Kind Contribution not visible in the cash flow of the Project, PO-Project Owner, P1- Partner 1, P2-Partner 2, TBA-To be acquired, A-Available, PTM- Prototyping, Test & Measurement, ETS-Equipment, tools and R&D supplies

Table 7: Key Resource Requirement List for the Project

Resource Category	Resource Description	Units Required	Available/To be-Acquired	Possible Financing
Expert Services	Project Leader	500 Hrs	A(PO)	PF, KC
Expert Services	Asst. Project Leader	300 Hrs	A(PO)	PF, KC
Expert Services	Chief R&D Supervisor	500 Hrs	A(PO)	PF, KC
Expert Services	Local Tech Expert	300 Hrs	TBA (PO)	PF
Expert Services	Manufacturing Expert	200 Hrs	A(P1)	PF, KC
Expert Services	Activity Leader at P1	300 Hrs	A(P1)	PF, KC
Expert Services	Activity Leader at P2	300 Hrs	A(P2)	PF, KC
Expert Services	Temporary R&D Expert	200 Hrs	TBA (PO)	PF
R&D Staff	R&D Faculty	300 Hrs	A(PO)	PF, KC
R&D Staff	Full time R&D Staff 1	22 month	TBA(PO)	PF
R&D Staff	Full time R&D Staff 2	22 month	TBA(PO)	PF
R&D Staff	Full time prototype developer	10 month	TBA(P1)	PF, CC
R&D Staff	Full time researcher	10 month	TBA(P2)	PF, CC
R&D Staff	Other R&D staff	1000 Hrs	TBA (PO/P1/P2)	PF,KC
R&D Staff	Student R&D support	2000 Hrs	TBA (PO/P1/P2)	PF
Lab PTM Facility	Material test lab	400 Hrs	A(PO)	PF, KC
Lab PTM Facility	Product standardization lab	5 times	A (National Lab)	PF
Lab PTM Facility	Electrical workshop	400 Hrs	A(P1)	PF, KC
Lab PTM Facility	Metal workshop	400 Hrs	A(P2)	PF, KC
Lab PTM Facility	Electronic circuit lab	500 Hrs	A(PO)	PF, KC
ETS	Computers	5	TBA(PO, P1)	PF, CC
ETS	Oscilloscope	2	TBA(PO, P1)	PF
ETS	Drill machine	1	TBA(P1)	PF, CC
ETS	Grinding machine	1	TBA(P1)	PF, CC
ETS	Welding machine	1	TBA(P1)	PF
ETS	Metal parts	As req.	TBA(P1)	PF
ETS	Electronic Parts	As req.	TBA(PO)	PF
ETS	Electronic Parts	As req.	TBA(P1)	PF
Other Serv. & Fac.	Space, electricity	As req.	A(PO/P1/P2)	PF, KC, CC
Other Serv. & Fac.	Office consumables	As req.	TBA (PO/P1/P2)	PF
Other Serv. & Fac.	Local travels/field-visits	As req.	TBA (PO/P1/P2)	PF
Other Serv. & Fac.	Local transportation	As req.	TBA (PO/P1/P2)	PF, CC
Other Serv. & Fac.	International travels	2	TBA (P2)	PF
Admin & Support	Project Administrator	200 Hrs	A(PO)	PF, KC
Admin & Support	Accounting, Procurements	WP	A(PO/P1/P2)	PF, KC
Admin & Support	Audit	2	TBA(PO)	PF
Admin & Support	Admin and support staff	WP	A(PO, P1, P2)	PF, KC

3.4.7.2 The Initial Project Budget

The initial project budget may be obtained by considering the Key Resource Requirement List and allocating key resource requirements to different prescribed budget headings.

The programme prescribed budget format therefore consists of 5 heading. Subheadings are also provided in order to facilitate more elaborate cost estimation. The headings and subheadings are as indicated in the Initial Project Budget given in Table 8.

According to the Programme budgeting requirements, all project costs must be estimated in accordance to the local standard costs for certain action in a particular activity location. Nepalese costs should be estimated in Nepalese Rupees (NPR and converted to NOK equivalent using 1NOK=12NPR) and Norwegian costs in NOK.

The filling of the Programme prescribed overall budget format is indicated in Table 8. Some contingencies and minor costs are also added, apart from those in the Key Resource Requirement List. This approximately gives the total project budget required to implement the originally conceived project, with the partnership in consideration.

Once the initial budget is obtained, it is time to look at the Programme Funding Limits and Recommended Cost Plan for Projects under the Programme Framework.

In Table 9, the analysis of the initial project budget is also presented, with respect to the Programme Funding Limits and Recommended Cost Plan for Projects under the Programme Framework. The analysis results are understood after we refer to Section 3.4.7.3. The analysis is described in Section 3.4.7.4.

Table 8: Initial Project Budget

SN	Budget Heading	Principal User	Resource Availability	Unit	# of Units (A)	Unit Rate NPR	Unit Rate NOK (B)	Total Project Budget (TPB) (AxB)	Individual Partner Budget		
									NPRI (PO)	NPEI (P1)	NORI (P2)
A	**Expert Services/Facility Costs**										
A.1	***Expert Organizational Human Resource***										
A.1.1	Project Leader (PO)	NPRI (PO)	Available	Hours	500	400	33	**16,667**	**16,667**		
A.1.2	Asst. Project Leader	NPRI (PO)	Available	Hours	300	300	25	**7,500**	**7,500**		
A.1.3	Chief R&D Supervisor	NPRI (PO)	Available	Hours	500	350	29	**14,583**	**14,583**		
A.1.4	Activity Leader at P1 (NPEI)	NPEI (P1)	Available	Hours	300	300	25	**7,500**		**7,500**	
A.1.5	Activity Leader at P2 (NORI)	NORI(P2)	Available	Hours	300		250	**75,000**			**75,000**
A.2	***Expert Technical Personnel Services***										
A.2.1	Local Tech Expert	NPRI (PO)	TBA	Hours	300	500	42	**12,500**	**12,500**		
A.2.2	Manufacturing Expert	NPEI (P1)	Available	Hours	200	300	25	**5,000**		**5,000**	
A.2.3	Temporary R&D Expert	NPRI (PO)	TBA	Hours	200	400	33	**6,667**	**6,667**		
A.3	***Other Expert Services/Facility Cost***										
A.3.1	Product standardization lab	NPRI (PO)	Available	Times used	5	10,000	833	**4,167**	**4,167**		
A.3.2	Unforeseen	NPRI (PO)	TBA	Total	1	50,000	4,167	**4,167**	**4,167**		
A	**Subtotal Expert Services/Facility Costs**							**153,750**	**66,250**	**12,500**	**75,000**
B	**Active Researcher Cost**										
B.1	***Core research staffs***										
B.1.1	R&D Faculty	NPRI (PO)	Available	Hours	300	300	25	**7,500**	**7,500**		
B.1.2	Full time R&D Staff 1	NPRI (PO)	TBA	Month	22	20,000	1,667	**36,667**	**36,667**		
B.1.3	Full time R&D Staff 2	NPRI (PO)	TBA	Month	22	18,000	1,500	**33,000**	**33,000**		
B.1.4	Full time prototype developer	NPEI (P1)	TBA	Month	10	25,000	2,083	**20,833**		**20,833**	
B.1.5	Full time researcher	NORI(P2)	TBA	Month	10		10,000	**100,000**			**100,000**
B.2	***Temporary/Short term Research Staffs***										
B.2.1	Other R&D staff	NPRI (PO)	TBA	Hours	500	250	21	**10,417**	**10,417**		
B.2.2	Other R&D staff	NPEI (P1)	TBA	Hours	300	250	21	**6,250**		**6,250**	
B.2.3	Other R&D staff	NORI(P2)	TBA	Hours	200		400	**80,000**			**80,000**
B.2.4	Student R&D support	NPRI (PO)	TBA	Hours	1,500	200	17	**25,000**	**25,000**		
B.2.5	Student R&D support	NORI(P2)	TBA	Hours	500		50	**25,000**			**25,000**
B.2.6	Others short term researcher as required	NPRI (PO)	TBA	Total	1	50,000	4,167	**4,167**	**4,167**		
B	**Subtotal Active Researcher Cost**							**348,833**	**116,750**	**27,083**	**205,000**

Table 8: Initial Project Budget [Continued]

C	Equipment, Tools, Material & Technical Services/Facilities										
C.1	***Equipment and Tools***										
C.1.1	Digital clamp-meter (rent/depreciation charge)	NPRI (PO)	Available	Nos	2	5,000	417	**833**	**833**		
C.1.2	Oscilloscope	NPRI (PO)	TBA	Nos	1	80,000	6,667	**6,667**	**6,667**		
C.1.3	Oscilloscope	NPEI (P1)	TBA	Nos	1	80,000	6,667	**6,667**		**6,667**	
C.1.4	Drill machine	NPEI (P1)	TBA	Nos	1	10,000	833	**833**		**833**	
C.1.5	Grinding machine	NPEI (P1)	TBA	Nos	1	5,000	417	**417**		**417**	
C.1.6	Welding machine	NPEI (P1)	TBA	Nos	1	20,000	1,667	**1,667**		**1,667**	
C.1.7	Software licenses	NORI(P2)	TBA	Nos	3		1,000	**3,000**			**3,000**
C.1.8	Other Equipment and Tools (Rent/Depreciation/New)	NPRI (PO)	Available/TBA	Lump sum	1	50,000	4,167	**4,167**	**4,167**		
C.1.9	Other Equipment and Tools (Rent/Depreciation/New)	NPEI (P1)	Available/TBA	Lump sum	1	50,000	4,167	**4,167**		**4,167**	
C.1.10	Other Equipment and Tools (Rent/Depreciation/New)	NORI(P2)	Available/TBA	Lump sum	1		20,000	**20,000**			**20,000**
C.2	***Computer, Office Equipment and Furnitures***										
C.2.1	Desktop computer	NPRI (PO)	TBA	Nos	3	40,000	3,333	**10,000**	**10,000**		
C.2.2	Laptop computer	NPRI (PO)	TBA	Nos	1	70,000	5,833	**5,833**	**5,833**		
C.2.3	Desktop computer	NPEI (P1)	TBA	Nos	1	40,000	3,333	**3,333**		**3,333**	
C.2.4	Office furniture (computer table and chair)	NPRI (PO)	TBA	set	3	15,000	1,250	**3,750**	**3,750**		
C.2.5	Office furniture (computer table and chair)	NPEI (P1)	TBA	set	1	15,000	1,250	**1,250**		**1,250**	
C.2.6	Multifunction Printer	NPRI (PO)	TBA	Nos	1	25,000	2,083	**2,083**	**2,083**		
C.2.7	Other office equipments, Hard disk, pen drive, etc	NPRI (PO)	TBA	Total	1	50,000	4,167	**4,167**	**4,167**		
C.2.8	Other office equipments, Hard disk, pen drive, etc	NPEI (P1)	TBA	Total	1	20,000	1,667	**1,667**		**1,667**	
C.2.9	Other office equipments, Hard disk, pen drive, etc	NORI(P2)	TBA	Total	1		5,000	**5,000**			**5,000**
C.3	***Consumables for Experiments/Prototyping***										
C.3.1	Metal parts	NPEI (P1)	TBA	Total	1	40,000	3,333	**3,333**		**3,333**	
C.3.2	Electronic and other Parts /Consumables	NPRI (PO)	TBA	Total	1	50,000	4,167	**4,167**	**4,167**		
C.3.3	Electronic Parts and Other consumables	NPEI (P1)	TBA	Total	1	30,000	2,500	**2,500**		**2,500**	
C.3.4	Consumables for Experiments/Prototyping	NORI (P2)	TBA	Total	1		5,000	**5,000**			**5,000**
C.4	***Local Technical Services/Facilities***										
C.4.1	Material test lab fractional operational cost	NPRI (PO)	Available	Hours	400	200	17	**6,667**	**6,667**		
C.4.2	Electrical workshop fractional operational cost	NPRI (PO)	Available	Hours	400	200	17	**6,667**	**6,667**		
C.4.3	Metal workshop fractional operational cost	NPEI (P1)	Available	Hours	400	200	17	**6,667**		**6,667**	
C.4.4	Electronic circuit lab fractional operational cost	NPRI (PO)	Available	Hours	500	100	8	**4,167**	**4,167**		
C.4.5	Other local technical services	NPRI (PO)	TBA	Total	1	50,000	4,167	**4,167**	**4,167**		
C	**Subtotal Equipment, Tools, Materials, and Local Tech Services**							**128,833**	**63,333**	**32,500**	**33,000**

Table 8: Initial Project Budget [Continued]

D	**Other costs**						
D.1	***Space, Electricity, Office Consumable, Local Transportation, Vehicle Rent***						
D.1.1	Office and work space rent/maintenance and electricity	NPRI (PO)	Available	Month	24	5,000	417
D.1.2	Office and work space rent/maintenance and electricity	NPEI (P1)	Available	Month	24	4,000	333
D.1.3	Office and work space rent/maintenance and electricity	NORI (P2)	Available	Month	24		1,000
D.1.4	Office consumables	NPRI (PO)	TBA	Per year	2	20,000	1,667
D.1.5	Office consumables	NPEI (P1)	TBA	Per year	2	10,000	833
D.1.6	Office consumables	NORI (P2)	TBA	Per year	2		500
D.1.7	Local transportation costs	NPRI (PO)	TBA	Per year	2	10,000	833
D.1.8	Local transportation costs	NPEI (P1)	TBA	Per year	2	5,000	417
D.1.9	Local transportation costs	NORI (P2)	TBA	Per year	2		2,000
D.2	***Conference and Publication***						
D.2.1	Local Conference and External Publication	NPRI (PO)	TBA	Total	1	120,000	10,000
D.2.2	International Conference and Publication	NPRI (PO)	TBA	Total	1		20,000
D.3	***Communication and Visibility***						
D.3.1	Communication costs	NPRI (PO)	TBA	Total	1	20,000	1,667
D.3.2	Communication costs	NPEI (P1)	TBA	Total	1	10,000	833
D.3.3	Communication costs	NORI(P2)	TBA	Total	1		2,000
D.3.4	Visibility action costs (local publication, brochure, web hosting, workshop, etc)	NPRI (PO)	TBA	Total	1	50,000	4,167
D.4	***Local Field Visits***						
D.4.1	Local field visit costs	NPRI (PO)	TBA	Total	1	100,000	8,333
D.5	***International Travel***						
D.5.1	Travel from Norway to Nepal	NORI(P2)	TBA	Per travel	2		20,000
D.6	***Miscellaneous***						
D.6.1	Miscellaneous	NPRI (PO)	TBA	Total	1	40,000	3,333
D.6.2	Miscellaneous	NPEI (P1)	TBA	Total	1	30,000	2,500
D.6.3	Miscellaneous	NORI(P2)	TBA	Total	1		5,000
D	**Subtotal Other Costs**						

Table 8: Initial Project Budget [Continued]

E	**Admin Cost**										
E.1	***Project admin staff***										
E.1.1	Project Administrator	NPRI (PO)	Available	Hours	200	500	42	**8,333**	**8,333**		
E.1.2	Project admin support staff	NPRI (PO)	Available	Hours	720	200	17	**12,000**	**12,000**		
E.2	***Accounting costs***										
E.2.1	Project Accounting cost	NPRI (PO)	Available	Hours	720	200	17	**12,000**	**12,000**		
E.2.2	Project Accounting cost	NORI(P2)	Available	Hours	240		50	**12,000**			**12,000**
E.3	***Audit cost***										
E.3.1	Audit cost	NPRI (PO)	TBA	Per year	2	40,000	3,333	**6,667**	**6,667**		
E.4	***Other admin services and overhead***										
E.4.1	Other admin services and overhead	NPRI (PO)	Available	Per year	2	30,000	2,500	**5,000**	**5,000**		
E.4.2	Other admin services and overhead	NPEI (P1)	Available	Per year	2	20,000	1,667	**3,333**		**3,333**	
E.4.3	Other admin services and overhead	NORI(P2)	Available	Per year	2		2,000	**4,000**			**4,000**
E	**Subtotal Admin Costs**							**63,333**	**44,000**	**3,333**	**16,000**

	TOTAL BUDGET							**847,083**	**332,833**	**89,250**	**425,000**

Table 9: Analysis of the Initial Project Budget

Heading	Total	NPRI (PO)	NPEI (P1)	NORI(P2)	% Distribution of Budget	Prescribed % Distribution	Available Funding	Funding Constraint	Comparison
A	153,750	66,250	12,500	75,000	18.2%	20%	70,000		
B	348,833	116,750	27,083	205,000	41.2%	30%	105,000		
C	128,833	63,333	32,500	33,000	15.2%	35%	122,500	175,000	477,667
D	152,333	42,500	13,833	96,000	18.0%	10%	35,000		
E	63,333	44,000	3,333	16,000	7.5%	5%	17,500	70,000	215,667
TOTAL	**847,083**	**332,833**	**89,250**	**425,000**	**100.0%**	**100.0%**	**350,000**		
TOTAL Nepalese Cost	422,083	39.3%	10.5%		49.8%	At least 50%			
TOTAL Norwegian Cost	425,000			50.2%	50.2%				
Available Funding	350,000				41.3%				
Total Contrib Req.	497,083		169,417		58.7%				
Minimum Contrib. Req.			**70,000**						

3.4.8 The Recommended Cost Plan of the Programme, Criteria, and Limits

The Programme recommends the following cost plan pyramid, which has been prepared considering the goal of the Programme.

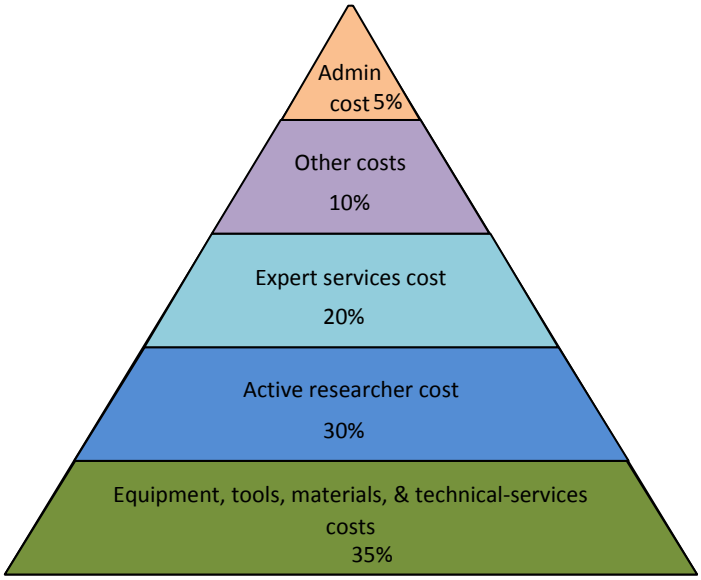

Figure 6: Recommended Cost Plan Pyramid

A look at the cost plan pyramid reveals that the Programme emphasizes on Equipment, Tools, Materials and Technical Services Cost (35%) and Active Researcher Cost (30%). The Programme therefore expects that the most of the Programme funding goes to these headings, which are very important for institutional and industrial competence building for overall industrial development of Nepal. The Programme next emphasizes on the Expert Services Cost (20%). The Other Cost (10%) and Admin Cost (5%) are considered only supportive costs. The Programme therefore puts a higher limit on these costs combined (maximum 20%), while puts a lower limit on Equipment, Tools, Materials and Technical Services Cost and Active Researcher Cost, minimum 50% combined; refer to the Chapter 2 Section 2.2.3 Table 4.

Further, minimum 50% of the project cost must be spent in the activities in Nepal. If it is not possible, then minimum 50% of the total Programme Funding must be spent on the activities in Nepal.

Criteria for Project Staff Costs [Expert Services, Active Researcher, and Specialized Technical Service]

In general, the salary of project staffs must be in close agreement with the primary employment organization salary levels, according to the qualification of the staffs. For all staff costs, the cost must be estimated in staff-hour or day or month of work and salary per hour or day or month. In general, staffs are employed in the Normal Work Hours (NWH) of the organizations involved. The staffs may also work on Overtime Work Hours (OWH) assignments, if absolutely necessary. Overtime work rules of the primary employment organization will apply to project staffs as well. Total OWH employment shall be limited to an extent that overstressed work conditions are avoided for the personnel. The salary, staff-cost, or remuneration scheme must be in general acceptable to the Project Consortium, the Staff, and the Programme. The basis for calculation of salary for a staff month or day or hour is basically the staff gross Salary per Month (SPM) for the equivalent position in the organization. The project employment and benefits is therefore normally tied up with the primary position of the staff already employed in the

organization. For new staffs, the staff position is tied up with an available equivalent position in the organization. The Salary per Hour (SPH) is obtained by dividing the Salary per Month (SPM) by approximate average effective working hour per month (generally taken as 150-160). The Salary per Day (SPD) is obtained by dividing SPM by approximate average effective working day per month (generally taken as 20-25). Per hour rate for Overtime Work Hour is recommended at maximum 150% of the normal rate, to encourage extra efforts and/or to have provision of specially required employment in the project for quality researchers who have other full time responsibility (for example a full-time excellent graduate student or a local expert). The OWH limit recommended is 30 to 45 hours per month depending on realistic estimate.

Any staff costs in the budget may have four parts in terms of staff hours.

1. Invoice to Project Staff Hours (From Programme Funding – Invoiced either by Primary Employer (NWH) or by Staff (NWH and/or OWH))
2. Organizational Contribution in Kind Staff Hours (NWH Organizational Contribution)
3. Personal Contribution in Kind Staff Hours (OWH Contribution)
4. Contribution in Cash (From Other Sources)

It should be noted that every kind or part of staff hour cost must be accompanied with proper documentation while reporting the cost. Time sheet of work is absolutely necessary, along with the staff employment contract or condition. Further, pay sheet is needed for any invoice to project and invoice to contribution in cash part of the staff hours. Contribution statements are required for Contribution in Kind. It therefore needs careful consideration in presenting the cost plan. The staff cost must be realistic to actual practice or intended practice in the organizations.

Further, it also should be noted that the Programme does not intend to provide scholarships/fellowships to graduate students at universities. Moreover, it encourages projects to plan for and provide as much R&D jobs as possible to young researchers locally, encouraging graduate programme students. The graduate programme students however may be employed as researchers if they are

1. allowed to officially work in the project for indicated number of hours per week/month in their academic programme and
2. preferably doing their academic project/thesis work under a related theme as the funded project title

Student employment needs permissions from the academic supervisor and the academic administrator. Student employment is generally paid employments, paid directly to the students.

All expert/leader costs shall generally come under the Expert Services and research staff costs under the Active Researcher Costs.

All Norwegian staff costs shall generally be estimated in accordance to the Norwegian Government rates. SINTEF Energy Research may be contacted for getting the estimation of rates. Some indication may be obtained from The Research Council of Norway website. The Norwegian staff costs shall generally come under the Expert Services costs or Specialized Technical-Services Costs. In required cases, Norwegian researcher may also be planned under active researcher cost.

It should be noted that Norwegian partners may participate in the project if they can contribute significantly with vital competence and resources in the project.

Criteria for Equipment, Tools, Materials, & Technical Services/Facility Costs

The programme encourages for development of specialized test and measurement systems, production/manufacturing methods/systems, software systems, etc. in line with project goals, particularly at the applicant institution. Therefore a major cost may be allocated here. Moreover, as the cost plan suggests, the programme has no intention to fund establishment of a major laboratory. Computers, printers, and similar may come under tools.

The programme also encourages use of local entrepreneurs in obtaining technical services (such as manufacturing of components, test systems, etc.) while conducting R&D works. This will ensure that local competence is developed for specialized businesses in a wider perspective. These competences may enable the local entrepreneurs to serve large businesses. Further, specialized technical services can be obtained from Norway, as a part of technology transfer scheme.

Norwegian partners can play major roles in obtaining specialized equipment, tools, materials and technical-services for the project. It is also an important means to account for Norwegian industry contribution in cash or kind.

The partner industries can make a major contribution under this heading.

It should be noted that Nepalese industry partner must contribute 20% of the Total Project Budget or at least 20% of the Total Programme Funding. Special consideration may be given to relax this criterion depending on actual conditions.

Criteria for Other Costs

The other costs refers to supportive costs like rent of space, electricity, field visits, travels, transportation, fuel, data collection costs, participation in seminars/workshops/conferences, communication costs, office consumables, office furniture, organization of meeting/workshop, etc.

Programme considers provision of limited international travel of expert (for providing special advice while accessing actual development in the R&D works) from Norway to Nepal and travel of principal researcher (for specialized training) from Nepal to Norway, in line with the project objective. Project consortium meeting should be held in Nepal, preferably at the time of Norwegian expert travelling from Norway to Nepal, coinciding with the technical purpose. The travelling Norwegian expert shall be competent to represent the Norwegian partners. Of course, there can be many local (in-country) travels and site visits in the project budget. Under special circumstances (when the travel is absolutely necessary but the limit on Other/Admin costs do not allow it), expert travel for problem solving from Expert Partner to Nepal may be included in the Expert Services cost and travel of principal researcher from Nepal to Expert Partner Organization for special training may be included in the Active Researcher cost.

Technical publications fees may be considered, if they are not highly cost intensive.

The travel costs may be estimated considering cheap means of transportation (discounted economy class return air ticket for air travel, train, and buses), accommodation costs at tourist class hotels, local transportation costs, food cost, pocket expenses, communication costs, others as necessary for the mission. Food costs and pocket expenses, accommodation cost included or excluded, may be estimated as per diem (a fixed amount per day).

The per diem for Norwegian travels shall generally be in Norwegian Government rate. SINTEF Energy Research may be contacted for obtaining the rates.

For Nepalese travels, the per diem rate (including accommodation costs) of the primary organization may be used.'

The programme encourages participation in local conferences/workshops/seminars by local partners or researchers. Such costs can be included in the budget. Moreover, cost intensive international travels are not encouraged for participation in the conferences/workshops/seminars.

Criteria for Admin Costs

The admin costs refers to support staff cost, accounting costs, project administration cost, and other not easily accountable costs. The admin cost sought from the Programme Funding shall not be generally more than 5% of the project funding sought from the programme.

3.4.9 The Analysis of the Initial Project Budget

Now, it's time to analyze the Initial Project Budget and optimize, taking consideration of the Recommended Cost Plan, Criteria and Limits on the Programme Funding, and finally Organizational Capacities and Provisions to Participate in R&D Projects.

The analysis results are presented in Table 9. The following remarks may be made regarding the conceived project and the initial budget.

1. The Project Budget requirement is quite high NOK 847,083 compared to maximum funding that may be available to implement this kind of Project from the Programme, NOK 350,000.
2. The researcher cost required for the Project is quite high NOK 348,833 compared to what may be nominally available from the Programme Funding, NOK 105,000. Later, we may see that it is difficult to obtain organizational/personal contribution in this part of the budget. Therefore, it is impractical to implement the project with the Programme Funding unless the scope of the work is reduced or significant contribution is received from other sources or industrial partner to sponsor the researcher cost. The whole project seems researcher cost intensive. Therefore, more effort must be there from the partners to meet this cost so that project scope may be kept intact.
3. The expert services cost is also high, NOK 153,750, compared to what may be available from the Programme, NOK 70,000. This is not a big problem as expert services costs are also contributed by significant contributions from all the partners. About 50% contribution in Kind may be obtained in this heading in general.
4. The equipment and tools budget is reasonable, NOK 128,833, when compared with what may be nominally available from the Programme, NOK 122,500. Since, the equipment and tools can be acquired in project with organizational contributions (at least, organizations are willing to contribute in this heading since the equipment and tools remain with the organization for future use), this is an advantage. If contributions are planned in this heading, the budget may be diverted to the researcher budget.
5. The other cost part is quite high, NOK 152,333, compared to what is nominally available from the programme funding, NOK 35,000. Significant reduction is therefore necessary in this heading, if adequate contributions are not made or available. In other costs, the travel cost is one of the costs which cannot be reduced with contribution. Moreover, sometimes in partnerships, people travel between organizations in relation with other cooperation projects also and this may be utilized to serve the purpose of the Project. Further, the travel may be sponsored by other small funding sources later.
6. The admin cost is also high, NOK 63,333, compared to what could be available from the Programme Funding, NOK 17,500. It is clear that the Programme does not intend to bear more of the admin costs except for the absolutely necessary activities.

Therefore, there should be some contributions from the participating organizations in this heading. It is impractical to cover this cost from other sources of contributions.

7. Looking at the overall budget, 49.8% is the total Nepalese costs and 50.2% is total Norwegian cost. This may be adjusted easily to fit programme requirement that minimum 50% cost should be Nepalese costs. Similarly, it should be noted that minimum NOK 175,000 of Programme Funding shall be spent in Nepal. Further, Programme Funding part for B+C budget headings shall be minimum 175,000.
8. The Programme Framework requires 20% industrial contribution. In this project, the nominal contribution requirement is NOK 169,407 and minimum requirement is NOK 70,000 from NPEI.
9. The maximum Programme Funding that may be available for the D+E budget heading is NOK 70,000.

It is therefore necessary to make major adjustments/contributions in the budget. First of all, we can look at the practical amount of contributions that may be made in the Project Budget from the participating organization. This is a part of the optimization process to be considered in the beginning. But, before this step is done, it is worthwhile to look at the Organizational Capacities and Provisions.

3.4.10 Organizational capacities and provisions to participate in R&D projects

It's now time to look at the organizational capacities and provisions to participate in such R&D projects. The following capacities and provisions to use those capacities are normally true with institutional and industrial partners.

1. Research institutions like universities and colleges have an integral responsibility to conduct R&D to build knowledge and technical competences; for overall improvement of quality of education they deliver and overall contribution in science and technology development. Academic personnel at these institutions have requirements to participate in R&D projects. Further, participation in R&D is rather encouraged. Therefore, there is always a provision that the work of the institutional personnel in part or whole contributes to the R&D project. Independent research institution which runs the institution with contract research may have less provision to contribute.
2. People involved in R&D normally work overtime for their professional development and effective contribution to the society and development of science and technology. Therefore, they are willing to make personal contribution to the R&D project. Moreover, this part may not be planned in advance, as it may be required at any stage of the Project implementation.
3. Research institutions normally have general and specialized laboratories, which they normally make avail at less than normal operating cost for R&D project. Specialized laboratories are often set with external grants and the institutions have responsibility of effective utilization or maximal utilization with R&D work brought in. There is therefore provision to use laboratories and workshops with significant contribution.
4. R&D projects carried out institutions may attract funding from other local and international funding sources. Therefore, external to the programme funding may be expected in the R&D project implementation. However, this may not be considered during the Project design to satisfy basic objective, unless there is a prior assurance from the source.
5. Industries normally have some provision of funding R&D for their product refinement or new product development. Since the Programme's major goal is industrial development in Nepal, Nepalese industries naturally should have some interest in contributing to the Project. The industrial contribution of 20% is the

requirement in the Programme Funding and participating industry should try in best to make the required contribution available. In turn, industries may get proprietary rights on technology developed or even put the R&D project product right into the market, boosting their business.

6. Norwegian institutions are expected to contribute more with competence and resources. It is therefore natural to expect more contribution from Norwegian institutions. Further, it is natural that Norwegian institution involvement costs are quite high compared to Nepalese institution involvement costs. Therefore, it is not practical to expect that majority of the activities in Norwegian institutions get funded from the Programme Funding. Only very essential costs shall be considered from the Programme Funding. The institutions rather get benefited by having opportunity to work on appropriate science and technology development problem to enhance their knowledge and competence further.
7. Norwegian industries normally do look to expand business in the developing country like Nepal and introduce products suited to local conditions. They consistently look for local partners for product development, optimization, and marketing. The Project gives such opportunity and it should be attractive to them. The cost of product development in country like Nepal should be lot less compared to that in Norway. Therefore, it is worthy prospect to participate in the Project and get most with less investment.

3.4.11 Project Plan Optimization Using Available Contribution Provisions

For this step, we need to divide the required budget into funding parts for every participating organization. At least, the following divisions or funding parts are necessary.

1. Programme Funding
2. Contribution in Kind to own budget
3. Contribution in Cash to own budget
4. Contribution in Cash from other sources, including partners
5. Contribution in Kind from other sources, including partners

The allocation of the total budget requirement to the above divisions (sources) gives us the detail funding plan for each participating organization's budget. It may be worthwhile to take a note of the following as well.

1. Contribution in Cash to other partner's budget
2. Contribution in Kind to other partner's budget

We now fill out the detail budget with detail funding plan, first using own Contribution in Kind/Cash to obtain initial estimate of the required Programme Funding. In this trial, for every already available personnel/facilities/services, we assume 50% contribution in Kind. For any new equipment, we consider 40% Contribution in Cash for the institution partners and 100% Contribution in Cash for the industry partner. Rest of the funding required is allocated to the Programme Funding.

The result of the trial is summarized in Table 10. The focus is now on the Programme Funding requirements to implement the original plan using the contributions. It reveals the following.

1. The Programme funding required is still NOK 672,508, which is still very high compared to the maximum funding available, NOK 350,000.
2. The Other Cost required from the Programme Funding is also still too high, NOK 131,333, which is quite high compared to nominal funding available from Programme Funding NOK 35,000.

3. The Admin Cost required from the Programme Funding is also still high, NOK 35,000, which is quite high compared to nominal funding available from the Programme Funding, NOK 17,500. Further D+E heading cost required from Programme Funding is NOK 166,333, while the limit is NOK 70,000.
4. About NOK 35,000 in cash/kind contribution may be expected from the NPEI further, to meet the contribution requirement of 20% of Programme Funding in minimum. This suggests that the Programme Funding budget may be brought inside 639,508 with this contribution, which is still higher than the Programme Funding limit of 350,000. We can allocate the required NOK 35,000 additional contribution from industry as cash contribution to researcher cost.

It is therefore evident that the work plan is very hard to implement in the framework unless it is adjusted, with minimum sacrifice in the objective but changing the strategy of implementation.

3.4.12 Project Plan Optimization with Change in Implementation Strategy and Carrying Out Cost Reductions

The Project Plan may now be optimized by changing the work plan or the implementation strategy.

It can be seen that the Active Researcher budget is too high. One of the factors is the Norwegian active researcher cost, which is NOK 205,000. This may be reduced significantly with strategy of carrying out the major part of the research and development only in Nepal, with the same or little addition of the active researcher cost in Nepal.

If we reduce the Norwegian Active Researcher cost by eliminating the “Full time researcher” and “Other R&D Staff”, a reduction of NOK 180,000 may result. This results in total Programme Funding requirement of 639,508-180,000=457,508.

We can reduce the other cost by removing the “International Conference and Publication”. This results in reduction by NOK 20,000. Since there is already some budget for Local Conference and External Publication, this will not change the scope of the project much. Let us expect the reduction in cost of Office and Work Space Rent/Maintenance by a total of NOK 10,000, mainly in Norwegian Part, since the activity in Norway is now reduced.

Further let us initially reduce the travel from Norway to Nepal from 2 to 1. This results in reduction of budget by NOK 20,000. The Miscellaneous part may be reduced by say NOK 5,000.

In the Admin Cost part, the cost may be reduced by reducing Project Accounting cost mainly in the Norwegian part, with a reduction of NOK 5,000. Similarly, the Project Administrator cost and Project Admin Support Staff cost may be reduced, by approximately, NOK 5,000.

The total reduction is NOK 65,000. The total Programme Funding required is still 457,508-65,000=392,508. We therefore need further reductions to meet the criteria.

The reductions reveal that we may not be able to support even a single visit from Norway to Nepal, unless other provisions are made. So we set the international travel from Norway to Nepal to 0, with further reduction in cost amounting NOK 20,000. We may reduce the overall “Space Rent/Maintenance and Electricity” and other overheads by convincing the respective organizations.

By carrying out these cost reductions, we obtain a funding plan that closely fits to the Programme Funding Criteria, as summarized in Table 11. The Total Programme Funding requirement finally comes down to NOK 350,125. The final budget closely fits into criteria. Although the project cost is reduced, it is fairly balanced budget, in terms of cost of activities and contributions.

We now have to compare the original budget with the revised budget; refer to Table 12. We can easily note the changes and accordingly change the work-plan and the schedule.

The optimization described here is simple case, where cost reductions by removing certain activities (which are basically intended for enhancements of project outcomes) have resulted in better/close fitness to the Programme Framework. Although not every project is of such kind, the design exercise may reveal the following regarding suitability/practicality of the Project Cost Plan for a 3 Party Project to fit the Programme Framework.

1. Total Project Budget = 150% of Total Programme Funding to be sought
2. Industrial Contribution = 20% of TPF (half in Kind and half in Cash)
3. Institutional Contribution (Nepal and Norway) = 15% of TPF (In Kind)
4. Cost of Nepalese Activities = 75% and Cost of Norwegian Activities = 25% of TPF/TPB
5. Cost of Activities in Nepalese Institution = 50-60% of TPF/TPB (20-25% of own budget as Contribution in Kind)
6. Cost of Activities in Nepalese Industry = 15-25% of TPF/TPB (100-150% of own budget as Contribution in Cash and Kind)
7. Contribution from Norwegian Institution = (40-50% of own budget as Contribution in Kind

Similar consideration may be employed for other cases.

Table 13 indicates the sample workout of detail budget or funding plan for part of NPRI cost; Expert Services and Active Researcher costs.

Table 10: Analysis of the Initial Project Budget: Calculation of Initial Programme Funding Requirement

	Programme Funding Requirement for the Original Budget after Considering Organizational Contributions								
Heading	**Total**	**NPRI (PO)**	**NPEI (P1)**	**NORI (P2)**	**% Distribution of TPF**	**Prescribed % Distribution**	**Nominal PF Available**	**Funding Constraint**	**Comparison**
A	90,625	46,875	6,250	37,500	13.5%	20%	70,000		
B	345,083	113,000	27,083	205,000	51.3%	30%	105,000		
C	70,467	39,500	9,167	21,800	10.5%	35%	122,500	175,000	415,550
D	131,333	37,500	9,833	84,000	19.5%	10%	35,000		
E	35,000	25,333	1,667	8,000	5.2%	5%	17,500	70,000	166,333
TOTAL	**672,508**	**262,208**	**54,000**	**356,300**	**100.0%**	**100.0%**	**350,000**		
TOTAL Nepalese Cost					47.0%				
TOTAL Norwegian Cost					53.0%				
Available Funding	350,000								
Minimum Contrib. Req.			**70,000**						

Note: The analysis indicates that major cost reduction is necessary

Table 11: Final Project Budget and Programme Funding Requirement after Cost Reductions/Optimizations

	Total Programme Funding (TPF) Requirements									Total Project Budget (TPB)				
Heading	**Total**	**NPRI (PO)**	**NPEI (P1)**	**NORI (P2)**	**% of TPF**	**Prescribed %**	**Nominal PF Available**	**Funding Constraint**	**Comparison**	**Total**	**NPRI (PO)**	**NPEI (P1)**	**NORI (P2)**	**% Distribution of TPF**
A	90,625	46,875	6,250	37,500	25.9%	20%	70,000			153,750	66,250	12,500	75,000	29.2%
B	130,083	78,000	27,083	25,000	37.2%	30%	105,000			168,833	116,750	27,083	25,000	32.1%
C	64,467	39,500	9,167	15,800	18.4%	35%	122,500	175,000	**194,550**	118,833	63,333	32,500	23,000	22.6%
D	44,617	28,833	6,583	9,200	12.7%	10%	35,000			50,817	31,833	8,583	10,400	9.7%
E	20,333	16,000	833	3,500	5.8%	5%	17,500	70,000	**64,950**	34,000	25,333	1,667	7,000	6.5%
TOTAL	**350,125**	**209,208**	**49,917**	**91,000**	**100.0%**	**100.0%**	**350,000**			**526,233**	**303,500**	**82,333**	**140,400**	**100.0%**
TOTAL Nepalese Cost		59.8%	14.3%		**74.0%**						57.7%	15.6%		**73.3%**
TOTAL Norwegian Cost					**26.0%**									**26.7%**
Total Contribution	**176,108**	**59,292**	**67,417**	**49,400**										
% Contrib in TPF/TPB	50.3%	16.9%	19.3%	14.1%						33.5%	11.3%	12.8%	9.4%	

Table 12: Comparison between the Initial Project Budget and the Final Budget with Funding Plan (Changes are indicated in bold)

					COMPARISON								Funding Plan	
					Initial	Final	Initial	Final	Initial	Final	Initial	Final		
SN	Budget Heading	Principal User	Resource Availability	Unit	# of Units (A)	# of Units (A)	Unit Rate NPR	Unit Rate NPR	Unit Rate NOK (B)	Unit Rate NOK (B)	TPB (AxB)	TPB (AxB)	Programme Funding	Contribution in Kind (Cash in Bold)
A	**Expert Services/Facility Costs**													
A.1	***Expert Organizational Human Resource***													
A.1.1	Project Leader (PO)	NPRI (PO)	Available	Hours	500	500	400	400	33	33	16,667	16,667	8,333	8,333
A.1.2	Asst. Project Leader	NPRI (PO)	Available	Hours	300	300	300	300	25	25	7,500	7,500	3,750	3,750
A.1.3	Chief R&D Supervisor	NPRI (PO)	Available	Hours	500	500	350	350	29	29	14,583	14,583	7,292	7,292
A.1.4	Activity Leader at P1 (NPEI)	NPEI (P1)	Available	Hours	300	300	300	300	25	25	7,500	7,500	3,750	3,750
A.1.5	Activity Leader at P2 (NORI)	NORI(P2)	Available	Hours	300	300			250	250	75,000	75,000	37,500	37,500
A.2	***Expert Technical Personnel Services***													
A.2.1	Local Tech Expert	NPRI (PO)	TBA	Hours	300	300	500	500	42	42	12,500	12,500	12,500	-
A.2.2	Manufacturing Expert	NPEI (P1)	Available	Hours	200	200	300	300	25	25	5,000	5,000	2,500	2,500
A.2.3	Temporary R&D Expert	NPRI (PO)	TBA	Hours	200	200	400	400	33	33	6,667	6,667	6,667	-
A.3	***Other Expert Services/Facility Cost***													
A.3.1	Product standardization lab	NPRI (PO)	Available	Times used	5	5	10,000	10,000	833	833	4,167	4,167	4,167	-
A.3.2	Unforeseen	NPRI (PO)	TBA	Total	1	1	50,000	50,000	4,167	4,167	4,167	4,167	4,167	-
A	**Subtotal Expert Services/Facility Costs**										**153,750**	**153,750**	**90,625**	**63,125**
B	**Active Researcher Cost**													
B.1	***Core research staffs***													
B.1.1	R&D Faculty	NPRI (PO)	Available	Hours	300	300	300	300	25	25	7,500	7,500	3,750	3,750
B.1.2	Full time R&D Staff 1	NPRI (PO)	TBA	Month	22	22	20,000	20,000	1,667	1,667	36,667	36,667	1,667	**35,000**
B.1.3	Full time R&D Staff 2	NPRI (PO)	TBA	Month	22	22	18,000	18,000	1,500	1,500	33,000	33,000	33,000	-
B.1.4	Full time prototype developer	NPEI (P1)	TBA	Month	10	10	25,000	25,000	2,083	2,083	20,833	20,833	20,833	-
B.1.5	Full time researcher	NORI(P2)	TBA	Month	**10**	**0**			10,000	10,000	**100,000**	**0**	-	-
B.2	***Temporary/Short term Research Staffs***													
B.2.1	Other R&D staff	NPRI (PO)	TBA	Hours	500	500	250	250	21	21	10,417	10,417	10,417	-
B.2.2	Other R&D staff	NPEI (P1)	TBA	Hours	300	300	250	250	21	21	6,250	6,250	6,250	-
B.2.3	Other R&D staff	NORI(P2)	TBA	Hours	**200**	**0**			400	400	**80,000**	**0**	-	-
B.2.4	Student R&D support	NPRI (PO)	TBA	Hours	1,500	1,500	200	200	17	17	25,000	25,000	25,000	-
B.2.5	Student R&D support	NORI(P2)	TBA	Hours	500	500			50	50	25,000	25,000	25,000	-
B.2.6	Others short term researcher as required	NPRI (PO)	TBA	Total	1	1	50,000	50,000	4,167	4,167	4,167	4,167	4,167	-
B	**Subtotal Active Researcher Cost**										**348,833**	**168,833**	**130,083**	**38,750**

Table 12: Comparison between the Initial Project Budget and the Final Budget with Funding Plan (Changes are indicated in bold) [Continued]

C	Equipment, Tools, Material & Technical Services/Facilities													
C.1	***Equipment and Tools***													
C.1.1	Digital clamp-meter (rent/depreciation charge)	NPRI (PO)	Available	Nos	2	2	5,000	5,000	417	417	833	833	417	417
C.1.2	Oscilloscope	NPRI (PO)	TBA	Nos	1	1	80,000	80,000	6,667	6,667	6,667	6,667	4,000	2,667
C.1.3	Oscilloscope	NPEI (P1)	TBA	Nos	1	1	80,000	80,000	6,667	6,667	6,667	6,667	-	6,667
C.1.4	Drill machine	NPEI (P1)	TBA	Nos	1	1	10,000	10,000	833	833	833	833	-	833
C.1.5	Grinding machine	NPEI (P1)	TBA	Nos	1	1	5,000	5,000	417	417	417	417	-	417
C.1.6	Welding machine	NPEI (P1)	TBA	Nos	1	1	20,000	20,000	1,667	1,667	1,667	1,667	-	1,667
C.1.7	Software licenses	NORI(P2)	TBA	Nos	3	3			1,000	1,000	3,000	3,000	1,800	1,200
C.1.8	Other Equipment and Tools (Rent/Depreciation/New)	NPRI (PO)	Available/TBA	Lump sum	1	1	50,000	50,000	4,167	4,167	4,167	4,167	2,500	1,667
C.1.9	Other Equipment and Tools (Rent/Depreciation/New)	NPEI (P1)	Available/TBA	Lump sum	1	1	50,000	50,000	4,167	4,167	4,167	4,167	-	4,167
C.1.10	Other Equipment and Tools (Rent/Depreciation/New)	NORI(P2)	Available/TBA	Lump sum	1	1			**20,000**	**10,000**	**20,000**	**10,000**	6,000	4,000
C.2	***Computer, Office Equipment and Furnitures***													
C.2.1	Desktop computer	NPRI (PO)	TBA	Nos	3	3	40,000	40,000	3,333	3,333	10,000	10,000	6,000	4,000
C.2.2	Laptop computer	NPRI (PO)	TBA	Nos	1	1	70,000	70,000	5,833	5,833	5,833	5,833	3,500	2,333
C.2.3	Desktop computer	NPEI (P1)	TBA	Nos	1	1	40,000	40,000	3,333	3,333	3,333	3,333	-	3,333
C.2.4	Office furniture (computer table and chair)	NPRI (PO)	TBA	set	3	3	15,000	15,000	1,250	1,250	3,750	3,750	2,250	1,500
C.2.5	Office furniture (computer table and chair)	NPEI (P1)	TBA	set	1	1	15,000	15,000	1,250	1,250	1,250	1,250	-	1,250
C.2.6	Multifunction Printer	NPRI (PO)	TBA	Nos	1	1	25,000	25,000	2,083	2,083	2,083	2,083	1,250	833
C.2.7	Other office equipments	NPRI (PO)	TBA	Total	1	1	50,000	50,000	4,167	4,167	4,167	4,167	2,500	1,667
C.2.8	Other office equipments	NPEI (P1)	TBA	Total	1	1	20,000	20,000	1,667	1,667	1,667	1,667	-	1,667
C.2.9	Other office equipments	NORI(P2)	TBA	Total	1	1			5,000	5,000	5,000	5,000	3,000	2,000
C.3	***Consumables for Experiments/Prototyping***													
C.3.1	Metal parts	NPEI (P1)	TBA	Total	1	1	40,000	40,000	3,333	3,333	3,333	3,333	3,333	-
C.3.2	Electronic and other Parts /Consumables	NPRI (PO)	TBA	Total	1	1	50,000	50,000	4,167	4,167	4,167	4,167	4,167	-
C.3.3	Electronic Parts and Other consumables	NPEI (P1)	TBA	Total	1	1	30,000	30,000	2,500	2,500	2,500	2,500	2,500	-
C.3.4	Consumables for Experiments/Prototyping	NORI (P2)	TBA	Total	1	1			5,000	5,000	5,000	5,000	5,000	-
C.4	***Local Technical Services/Facilities***													
C.4.1	Material test lab fractional operational cost	NPRI (PO)	Available	Hours	400	400	200	200	17	17	6,667	6,667	3,333	3,333
C.4.2	Electrical workshop fractional operational cost	NPRI (PO)	Available	Hours	400	400	200	200	17	17	6,667	6,667	3,333	3,333
C.4.3	Metal workshop fractional operational cost	NPEI (P1)	Available	Hours	400	400	200	200	17	17	6,667	6,667	3,333	3,333
C.4.4	Electronic circuit lab fractional operational cost	NPRI (PO)	Available	Hours	500	500	100	100	8	8	4,167	4,167	2,083	2,083
C.4.5	Other local technical services	NPRI (PO)	TBA	Total	1	1	50,000	50,000	4,167	4,167	4,167	4,167	4,167	-
C	**Subtotal Equipment, Tools, Materials, and Local Tech Services**										**128,833**	**118,833**	**64,467**	**54,367**

Table 12: Comparison between the Initial Project Budget and the Final Budget with Funding Plan (Changes are indicated in bold) [Continued]

D	**Other costs**													
D.1	***Space, Electricity, Office Consumable, Local Transportation, Vehicle Rent***													
D.1.1	Office and work space rent/maintenance and electricity	NPRI (PO)	Available	Month	24	24	**5,000**	**3,000**	**417**	**250**	**10,000**	**6,000**	**3,000**	**3,000**
D.1.2	Office and work space rent/maintenance and electricity	NPEI (P1)	Available	Month	24	24	**4,000**	**2,000**	**333**	**167**	**8,000**	**4,000**	**2,000**	**2,000**
D.1.3	Office and work space rent/maintenance and electricity	NORI (P2)	Available	Month	24	24			**1,000**	**100**	**24,000**	**2,400**	**1,200**	**1,200**
D.1.4	Office consumables	NPRI (PO)	TBA	Per year	2	2	20,000	20,000	1,667	1,667	3,333	3,333	3,333	-
D.1.5	Office consumables	NPEI (P1)	TBA	Per year	2	2	10,000	10,000	833	833	1,667	1,667	1,667	-
D.1.6	Office consumables	NORI (P2)	TBA	Per year	2	2			500	500	1,000	1,000	1,000	-
D.1.7	Local transportation costs	NPRI (PO)	TBA	Per year	2	2	10,000	10,000	833	833	1,667	1,667	1,667	-
D.1.8	Local transportation costs	NPEI (P1)	TBA	Per year	2	2	5,000	5,000	417	417	833	833	833	-
D.1.9	Local transportation costs	NORI (P2)	TBA	Per year	2	2			2,000	2,000	4,000	4,000	4,000	-
D.2	***Conference and Publication***													
D.2.1	Conference and External Publication	NPRI (PO)	TBA	Total	1	1	**120,000**	**60,000**	**10,000**	**5,000**	**10,000**	**5,000**	5,000	**-**
D.2.2	International Conference and Publication	NPRI (PO)	TBA	Total	1	0		**240,000**	**20,000**	**20,000**	**20,000**	**0**	-	**-**
D.3	***Communication and Visibility***													
D.3.1	Communication costs	NPRI (PO)	TBA	Total	1	1	20,000	20,000	1,667	1,667	1,667	1,667	1,667	-
D.3.2	Communication costs	NPEI (P1)	TBA	Total	1	1	10,000	10,000	833	833	833	833	833	-
D.3.3	Communication costs	NORI(P2)	TBA	Total	1	1			2,000	2,000	2,000	2,000	2,000	-
D.3.4	Visibility action costs (local publication, brochure, web hosting, workshop, etc)	NPRI (PO)	TBA	Total	1	1	50,000	50,000	4,167	4,167	4,167	4,167	4,167	-
D.4	***Local Field Visits***													
D.4.1	Local field visit costs	NPRI (PO)	TBA	Total	1	1	100,000	100,000	8,333	8,333	8,333	8,333	8,333	-
D.5	***International Travel***													
D.5.1	Travel from Norway to Nepal	NORI(P2)	TBA	Per travel	**2**	**0**			20,000	20,000	**40,000**	**0**	**-**	**-**
D.6	***Miscellaneous***													
D.6.1	Miscellaneous	NPRI (PO)	TBA	Total	1	1	**40,000**	**20,000**	**3,333**	**1,667**	**3,333**	**1,667**	**1,667**	**-**
D.6.2	Miscellaneous	NPEI (P1)	TBA	Total	1	1	**30,000**	**15,000**	**2,500**	**1,250**	**2,500**	**1,250**	**1,250**	**-**
D.6.3	Miscellaneous	NORI(P2)	TBA	Total	1	1			**5,000**	**1,000**	**5,000**	**1,000**	**1,000**	**-**
D	**Subtotal Other Costs**										**152,333**	**50,817**	**44,617**	**6,200**

Table 12: Comparison between the Initial Project Budget and the Final Budget with Funding Plan (Changes are indicated in bold) [Continued]

E	**Admin Cost**													
E.1	***Project admin staff***													
E.1.1	Project Administrator	NPRI (PO)	Available	Hours	**200**	**100**	500	500	42	42	**8,333**	**4,167**	**2,083**	**2,083**
E.1.2	Project admin support staff	NPRI (PO)	Available	Hours	**720**	**360**	200	200	17	17	**12,000**	**6,000**	**3,000**	**3,000**
E.2	***Accounting costs***													
E.2.1	Project Accounting cost	NPRI (PO)	Available	Hours	**720**	**360**	200	200	17	17	**12,000**	**6,000**	**3,000**	**3,000**
E.2.2	Project Accounting cost	NORI(P2)	Available	Hours	**240**	**100**			50	50	**12,000**	**5,000**	**2,500**	**2,500**
E.3	***Audit cost***													
E.3.1	Audit cost	NPRI (PO)	TBA	Per year	2	2	40,000	40,000	3,333	3,333	6,667	6,667	6,667	-
E.4	***Other admin services and overhead***													
E.4.1	Other admin services and overhead	NPRI (PO)	Available	Per year	2	2	**30,000**	**15,000**	**2,500**	**1,250**	**5,000**	**2,500**	**1,250**	**1,250**
E.4.2	Other admin services and overhead	NPEI (P1)	Available	Per year	2	2	**20,000**	**10,000**	**1,667**	**833**	**3,333**	**1,667**	**833**	**833**
E.4.3	Other admin services and overhead	NORI(P2)	Available	Per year	2	2			**2,000**	**1,000**	**4,000**	**2,000**	**1,000**	**1,000**
E	**Subtotal Admin Costs**										**63,333**	**34,000**	**20,333**	**13,667**
	TOTAL BUDGET										**847,083**	**526,233**	**350,125**	**176,108**

Table 13: A Sample of Detail Project Budget or Activity Funding Plan for NPRI

SN	Budget Heading	Principal User	Resource Availability	Unit	# of Units (A)	Unit Rate NPR	Unit Rate NOK (B)	NPRI (PO) Total Budget	Project Owner (NPRI (PO)) Detail Budget or Funding Plan									
									Programme Funding	Own Contribution		Contribution to/from Other				Contrib Budget		
										In Cash	In Kind	In Cash	To/From	In Kind	To/From	Cash	Kind	Total
A	Expert Services/Facility Costs																	
A.1	*Expert Organizational Human Resource*																	
A.1.1	Project Leader (PO)	NPRI (PO)	Available	Hours	500	400	33	16,667	8,333		8,333					0	8,333	8,333
A.1.2	Asst. Project Leader	NPRI (PO)	Available	Hours	300	300	25	7,500	3,750		3,750					0	3,750	3,750
A.1.3	Chief R&D Supervisor	NPRI (PO)	Available	Hours	500	350	29	14,583	7,292		7,292					0	7,292	7,292
A.1.4	Activity Leader at P1 (NPEI)	NPEI (P1)	Available	Hours	300	300	25	0	0							0	0	0
A.1.5	Activity Leader at P2 (NORI)	NORI(P2)	Available	Hours	300		250	0	0							0	0	0
A.2	*Expert Technical Personnel Services*																	
A.2.1	Local Tech Expert	NPRI (PO)	TBA	Hours	300	500	42	12,500	12,500							0	0	0
A.2.2	Manufacturing Expert	NPEI (P1)	Available	Hours	200	300	25	0	0							0	0	0
A.2.3	Temporary R&D Expert	NPRI (PO)	TBA	Hours	200	400	33	6,667	6,667							0	0	0
A.3	*Other Expert Services/Facility Cost*																	
A.3.1	Product standardization lab	NPRI (PO)	Available	Times used	5	10,000	833	4,167	4,167							0	0	0
A.3.2	Unforeseen	NPRI (PO)	TBA	Total	1	50,000	4,167	4,167	4,167							0	0	0
A	Subtotal Expert Services/Facility Costs							66,250	46,875	0	19,375	0	0	0	0	0	19,375	19,375
B	Active Researcher Cost																	
B.1	*Core research staffs*																	
B.1.1	R&D Faculty	NPRI (PO)	Available	Hours	300	300	25	7,500	3,750		3,750					0	3,750	3,750
B.1.2	Full time R&D Staff 1	NPRI (PO)	TBA	Month	22	20,000	1,667	36,667	1,667			35,000	NPEI			35,000	0	35,000
B.1.3	Full time R&D Staff 2	NPRI (PO)	TBA	Month	22	18,000	1,500	33,000	33,000							0	0	0
B.1.4	Full time prototype developer	NPEI (P1)	TBA	Month	10	25,000	2,083	0	0							0	0	0
B.1.5	Full time researcher	NORI(P2)	TBA	Month	0		10,000	0	0							0	0	0
B.2	*Temporary/Short term Research Staffs*																	
B.2.1	Other R&D staff	NPRI (PO)	TBA	Hours	500	250	21	10,417	10,417							0	0	0
B.2.2	Other R&D staff	NPEI (P1)	TBA	Hours	300	250	21	0	0							0	0	0
B.2.3	Other R&D staff	NORI(P2)	TBA	Hours	0		400	0	0							0	0	0
B.2.4	Student R&D support	NPRI (PO)	TBA	Hours	1,500	200	17	25,000	25,000							0	0	0
B.2.5	Student R&D support	NORI(P2)	TBA	Hours	500		50	0	0							0	0	0
B.2.6	Others short term researcher as required	NPRI (PO)	TBA	Total	1	50,000	4,167	4,167	4,167							0	0	0
B	Subtotal Active Researcher Cost							116,750	78,000	0	3,750	35,000	0	0	0	35,000	3,750	38,750

Chapter 4

Project Application and Award Procedure

4.1. The Project Application Call

RenewableNepal calls for Project Application for funding support from the Programme Annually. The call is expected in the month of March. At current, two further application calls are expected, March 2011 and March 2012.

The call is made in the Local Daily Newspaper in Nepal, the Website of the Programme at KU (www.ku.edu.np), and the Webpage of the Programme at SINTEF (www.sintef.no) on SINTEF Energy Page.

Only a limited number of projects are possible to be awarded with the Programme Funding Support in these calls, as the Programme has already awarded a significant number of Project Funding Support.

The Project Application Call normally comprises the following.

4.1.1 The Call Statement

A sample call statement could be as follows.

Applied Research and Development (R&D) Project Applications are invited from Nepalese Research Institutions (Universities, Colleges, and others) in partnership with Nepalese Industries (and Norwegian Institutions/Industries) to conduct Applied R&D for industrial development in the area of Renewable Energy valuable to Nepal, for obtaining funding support from the RenewableNepal Programme.

The deadline for submission of application is dd/mm/yyyy (submission deadline).

4.1.2 General Applicant Eligibility

All Nepalese Research Institutions (Universities, Colleges, R&D Laboratories, Test and Certification Laboratories, others registered in Nepal as research organization), related to Renewable Energy Technology (RET), may apply for the project as the Principal Applicant. The applicant shall have a degree of independence/autonomy in the project implementation and the budget handling. The applicant institution should have some relevant experience and resources to be able to implement the project effectively under the programme funding. The applicant should at least assign a key person (full time employee) of the applicant institution as the Project Leader, with at least a master's degree in the relevant field. The Application shall be a joint application with at least one Nepalese industry as the Main Local Industry Partner, and preferably with Norwegian institution and/or industries as Expert/Resource Partners.

The Application must be signed by the Head of the Institution or the Head of Division of Institution (authorized to make such application by the Head of the Institution and designation in the application as the Project Administrator) at which the Project Leader is employed. The signature should be in the application summary page.

The applicant is normally designated as Principal Applicant Nepalese Research Institution (PA-NPRI) and later, if the project funding is awarded then, as the Project Owner Nepalese Research Institution (PO-NPRI)

4.1.3 Partner Eligibility Criteria and Designation

All Nepalese industry or company that is related to renewable energy technology can be the Local Industry Partner. Also, public and private utilities, government and non-government agencies related to renewable energy technology can be the Local Partners equivalent to Local Industrial Partner or Local Institutional Partner, depending upon the nature of the Organization. Norwegian institutions (also individuals with research expertise such as professors) and industries can be the expert/resource partners. There can be multiple partners of same kind (institution or industry). If there are multiple similar kinds of partners, the application must differentiate between the Main Partner and Duplicate Partner.

The partner designation shall follow the following convention.

1. Main Nepalese Energy Industry Partner (M-NPEI)
2. Main Norwegian/Foreign Research Institution Partner (M-NORI/FORI)
3. Main Norwegian/Foreign Energy Industry Partner (M-NOEI/FOEI)

All other partners have designation of duplicate partner. Different units/divisions of same organization are not regarded as separate partners. One organization is dealt as one institution. For example, if there are two colleges of one university participating in the project activities, then only the university is regarded as the applicant/partner. Moreover, there can be two activity leaders, one each from each college.

All the partners shall at least assign one key person in the partner organization as the Activity Leader. All partners shall issue the letter of intent of cooperation with the main applicant regarding the cooperation in the implementation of the project according to the agreed Project Work-Plan, Schedule, and Budget, and subsequent updates to them.

4.1.4 Basic Criteria for Eligibility of Consideration for Project Funding Support

Please refer to Chapter 1 Section 1.7.

4.1.5 Amount of Funding Support and Duration of Support

Please refer to Chapter 1 Section 1.9 Table 2.

Note: The 2011 call can support projects up to two years, and 2012 call can support projects on one year duration only.

4.1.6 Recommended Cost Plan for the Project

Please refer to Chapter 3 Section 3.4.7.3. This is very important for strong project proposal preparation. It is recommended that the project design follows the procedure describe in Chapter 3, which eventually makes it easier to fill the application form.

4.1.7 Number of Projects to be awarded with Funding Support

The number may vary depending on the total amount of funding to be allocated in a particular call and the capacity of the Programme to manage/monitor simultaneous projects. The number is normally decided in the Annual Plan of the Programme and is clear at the time of call.

4.1.8 Thematic and Other Priority

The call will state the thematic and other priority, depending on the already running projects and the Programme strategy. This information may be available in the Annual Plan of the Programme.

4.1.9 Application Procedure in Brief

The Application Form and Guidelines are generally downloadable from the programme website (http://www.ku.edu.np/renewablenepal). The documents may also be requested from the programme by sending an e-mail request to renewablenepal@ku.edu.np.

Online application may be possible or required in future. It is therefore recommended to contact the project office or check the website or check the call statement carefully.

The complete application generally should contain:

1. The completed main application form (See Section 4.2)
2. The CV of all key persons in the prescribed format (with information that is relevant to the project application)
3. The letter of intent of cooperation from all partners
4. The organization profile of applicant institution and partners in the prescribed format (only with the information relevant to the project application)
5. The signed application summary page (signed by Head of Institution or Designated Project Administrator of the Principal Applicant Institution)

A guideline for filling the application documents is normally provided, if necessary.

The completed application is generally submitted by e-mail to renewablenepal@ku.edu.np. The Programme will give notification of receipt of application in one working day. The Programme may also provide notification on missing documents or additional information needed. In person submission is also possible at the Programme Office.

4.1.10 Date of Result and Date of Project Start

The result are published or notified after the first Steering Committee Meeting of the year. It is normally expected at the end of May. The Projects receiving funding support normally begin activities from July.

4.1.11 Provision of Multiple Applications from Same Institution/Project-Leader

Multiple applications may be submitted from an institution with different Project Leaders and Partners. There can be multiple applications from the same Project Leader with different Partners. But in the case of latter, the applications must be submitted with priority ranking. Maximum one application may be selected for further review after the first review by the Programme Office.

4.1.12 Confidentiality of the Submitted Application

The application is regarded as “Restricted Confidential”, with access to only those who evaluate the application. All the applications that are not awarded with the funding will be physically destroyed, generally after 3 months of date of publication of result, except for the application summary page. If some decisions are pending, then only the applications are kept for some more duration, but not beyond the year of call.

4.1.13 Application Evaluation Procedure in Brief

The applications are generally evaluated in three stages: 1st by the Programme Office, 2nd by an independent reviewer, and finally by the Steering Committee of the Programme. The evaluation criteria for different evaluation stages are different. Only short-listed applications after the Programme Office will go into independent reviewer and SC evaluations. Please refer to the "Evaluation Section" of this Chapter.

4.1.14 Project Application Preparation Support

The Programme office will generally assist the applicant and the partners in project design and in partner finding. Note that the project office cannot provide the support related to the research content or any related scientific or technical matters.

The programme office also organizes a workshop on application support in Nepal. The date, time, venue, and registration procedure are mentioned in the call. This workshop explains the application process, handles important issues related to the application, and brings partners together or even assists finding partners (industrial partner for institution, institutional partner for industry, and Norwegian partners based on R&D objectives of the interested). The workshop may be attended by all Nepalese institution or industry representatives and representatives of Norwegian institution/industry already in Nepal. The programme does not provide travel costs for attending the workshop.

The Programme may help in finding Norwegian Partners, finding contacts in KU, and finding contacts in SINTEF, in relation to the project application. Contact the Programme Office in advance by e-mail.

4.1.15 Contacts

The call also states the contacts for inquiry and assistance. Generally, the most preferred method of contact with the Programme is via e-mail to renewablenepal@ku.edu.np.

4.2. The Project Application

The complete application generally should contain:

1. The completed main application form
2. The CV of all key persons in the prescribed format (with information that is relevant to the project application)
3. The letter of intent of cooperation from all partners
4. The organization profile of applicant institution and partners in the prescribed format (only with the information relevant to the project application)
5. The signed application summary page (signed by Head of Institution or Designated Project Administrator of the Principal Applicant Institution)

4.2.1 Main Application Format

The main application form describes the project in detail. The contents of the main application form are described here by providing a short description and filling instructions. While filling the main application, all the instructions indicated in italics within the brackets [ ] must be replaced with appropriate contents, removing the brackets too. Rest in italics are just instructions, they are simply removed without any replacements.

1. Outline of the R&D Project

The outline of the project is described in this section.

1.1. Title of the Project

Project Title: *[Enter the project title here]*

1.2. Duration of the Project

Tentative Starting Date: *[Enter the tentative start date here, earliest July 01 of the year]*
Tentative End Date: *[Enter the tentative end date here; should be no later than 31 August 2013; match with the duration in year with the start date.]*
Duration: *[Enter the project duration here in years]*

1.3. Description of the Project Applicant and Project Leader

Refer to section 3.4.4.

Project Applicant Organization: *[Name of Applicant Institution and Address]*
Brief Description of the Project Applicant Organization: *[Describe the nature of the Applicant Institution in one or two statements; it shall be a research organization related to renewable energy sector]*
Executive Head of the Organization and Designation: *[Enter the name of the executive head of the organization and designation of the executive head]*
Project Contract Signing Authority: *[Enter the name and designation of the person who will sign the project contract with the Programme if the Project Funding is awarded]*
Project Administrator: *[Enter the name and designation of the Project Administrator who will administer the project if the funding is awarded; note that the application summary shall be signed by one of the three persons: Executive Head, Contract Signing Authority, or the Project Administrator]*
Project Leader: *[Enter the name of the Project Leader, designation, contact addresses including official e-mail address, official postal address, office phone number, and mobile number if available and willing-to-provide]*

1.4. Description of the Project Implementation Partners

Describe all the partners sequentially. Note that entities of same organization cannot be unique partners. Refer to section 3.4.4.

Type of Partner in the Project: *[Enter the type or partner: Main or Duplicate; Nepalese, Norwegian; Industry or Research Institution]*
Project Partner Organization: *[Name of the Partner Organization and Address]*
Brief Description of the Project Partner Organization: *[Describe the nature of the organization in one or two statements; it shall be a research organization or industry related to renewable energy sector*]
Executive Head of the Organization and Designation: *[Enter the name of the executive head of the organization and designation of the executive head]*
Project Consortium Agreement Signing Authority: *[Enter the name and designation of the person who will sign the Project Consortium Agreement with the Project Owner and Other Partners if the Project Funding is awarded; note that the Letter of Intent must be signed by the executive head or the Agreement signing authority]*
Activity Leader: *[Enter the name of the Activity Leader of the organization, designation, contact addresses including official e-mail address, official postal address, office phone number, and mobile number if available and willing-to-*

provide; note that the Activity Leader here is the main contact between the organization and the Project]

1.5. Key Project Objectives

[List 3 key objectives of the project: Refer to section3.4.3.]

1.6. Project Summary

[Enter the project summary in 200-250 words. Refer to section 3.4.1.]

1.7. The Project Funding Plan or Budget Summary

Enter the project funding plan summary in the following table for entire project duration. Refer to Section 3.4.7 and the actual detail project budget. The contribution from other sources refers to personal contribution and contributions from external funding sources.

Table 14: The Project Funding Plan Summary

Funding Source	Budget for All Participating Organizations				TOTAL
	PO-NPRI	M-NPEI	M-NORI	M-NOEI	
Programme Funding					
Self Contribution in Own Budget (Organizational)					
Other (Partner and External/Personal) Contribution					
TOTAL BUDGET					
Net Participant Organization Contribution					
Net External/Personal Contribution					

2. The Detailed Description of the R&D Aspect of the Project

[Describe. Refer to Section 3.4.2. This is very vital information in assessing the R&D merits of the Project.]

3. The Methodology of Project Implementation

Refer to Section 3.4.5. This is also very vital information in getting assured that the R&D described in Section 2 of the Application will be carried out properly by the partnership.

3.1 R&D Methodology

[Describe. Refer to Section 3.4.5.1.]

3.2 Methodology for General Project Management

[Describe. Refer to section 3.4.5.2.]

3.3 Summary of the Roles and Responsibilities of the Partners

[Describe. Refer to section 3.4.5.3.]

3.4 Summary of the Roles and Responsibilities of the Partners

[Describe Refer to section 3.4.5.4.]

3.5 Summary of the Role of other Major Resources

[Describe. Refer to section 3.4.5.5.]

4. The Work Plan, Schedule and Outputs

Refer to Section 3.4.6. Use the format specified in Table 6. This is also very vital information in getting assured that the R&D described in Section 2 of the Application will be carried out with proper implementation plan in place.

4.1 Work Plan

[Present the work plan with task and resource description in the format prescribed in Table 6. The work packages shall include all major R&D work packages, start-up, closing, day-to-day management, and monitoring-and-evaluation.]

4.2 Schedule

[Present a graphical schedule of work-packages and tasks or present a table of indicating start, end, and milestones associated with the tasks.]

4.3 Project Milestones, Deadlines and Important Events Calendar

[Present a list of milestones, deadlines, and important events in the following table format in chronological order. Mention any assumption, dependency, and other influencing factors in Remarks column]

Table 15: Project Milestones, Deadlines, and Important Events Calendar

SN	Date (Virtual/Real)	Event/Milestone/Deadline	Remarks
1			
2			

4.4 Summary of Major Human Resource Plan

[Present a summary of major human resource plan in the following table format. Mention any assumption, dependency, and other influencing factors in Remarks column]

Table 16: Major Human Resource Plan of the Project

SN	Name and/or type	Position in Project	Time basis (hourly/daily/monthly)	Total no. of Units of Employment	Employment Period (Date From-To)	Remarks
1						
2						

4.5 Summary of Other Main Resource Plan

[Present a summary of major equipment, tools, facilities, materials, acquisition plan in the following table format. Mention any assumption, dependency, and other influencing factors in Remarks column.]

Table 17: Resource Plan for the Project

SN	Resource	Purpose	Start of Acquisition	Period of Use (Date From – To)	Quantity	Intensity of Use	Remarks
1							
2							

4.6 List of Project Outputs

[Present a list of project outputs (logical or physical) such as major equipments, tools, durables, expert-man-hour, researcher-man-hour, research-student hours, publications, patents, intellectual property, short term effect, multiplier effects, etc. The example of quantity and quality may be: PhD student hour 180, Professor expert hour 200, 1 Patent in Nepal, etc.]

Table 17: List of Project Outputs

SN	Description of Output	Quantity and/or Quality	Timeline	Remarks
1				
2				

5. The Summary Budget:

5.1 Summary Budget for Nepalese Participants

Table 18: Summary Budget for Nepalese Participants

Budget Summary for Nepalese Participants [In Approximate NOK]

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
SN	Budget Heading	Project Applicant Budget (PO-NPRI)						Nepali Industry Partner Budget (M-NPEI)						Total Nepalese Costs G+H	Prog. Funding Net Nepalese Costs C+I	Total Contribution D+E+E+G+J+K+L+M
		Programme Funding PF	Self Contribution		Contribution from Others		Total Individual Budget C+D+E+F+G	Programme Funding PF	Self Contribution		Contribution from Others		Total Individual Budget I+J+K+L+M			
			Cash SCC	Kind SCK	Cash OCC	Kind OCK			Cash SCC	Kind SCK	Cash OCC	Kind OCK				
	1st Project Year															
1	A Expert Services Costs															
2	B Active Researcher Costs															
3	C Equipment, Tools, etc. Costs															
4	D Other Costs															
5	E Admin Cost															
	YEARLY SUB TOTAL (YST-1)	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5
	2nd Project Year															
6	A Expert Services Costs															
7	B Active Researcher Costs															
8	C Equipment, Tools, etc. Costs															
9	D Other Costs															
10	E Admin Cost															
	YEARLY SUB TOTAL (YST-2)	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10
	ALL YEARS															
11	A Expert Services Costs	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6
12	B Active Researcher Costs	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3
13	C Equipment, Tools, etc. Costs	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8
14	D Other Costs	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9
15	E Admin Cost	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10
	GRAND TOTAL (GT)	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2
	TOTAL CONTRIBUTION (TC-NP)		D+E of GT		F+G of GT				J+K of GT		L+M of GT					
	NET ORGANIZATIONAL CONTRIB (NOC-NP)										Fill shaded area considering self contribution and contribution to other partner budget					
	NET OTHER EXTERNAL/PERSONAL CONTRIBUTION (NEC-NP)												Fill shaded area considering personal contribution and contribution from other external sources, exclude partner contribution			

Add remarks column and indicate the other source of contribution, partners or external source, with amounts, and any other remarks

5.2 Summary Budget for Norwegian Participants

Table 19: Summary Budget for Norwegian Participants

Budget Summary for Norwegian Participants [In Approximate NOK]

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
SN	Budget Heading	Norwegian Research Institution Partner Budget M-NORI)						Norwegian Industry Partner Budget (M-NOEI)						Total Norwegian Costs G+H	Prog. Funding Net Norwegian Costs C+I	Total Contribution D+E+E+G+J+K+L+M
		Programme Funding PF	Self Contribution		Contribution from Others		Total Individual Budget C+D+E+F+G	Programme Funding PF	Self Contribution		Contribution from Others		Total Individual Budget I+J+K+L+M			
			Cash SCC	Kind SCK	Cash OCC	Kind OCK			Cash SCC	Kind SCK	Cash OCC	Kind OCK				
	1st Project Year															
1	A Expert Services Costs															
2	B Active Researcher Costs															
3	C Equipment, Tools, etc. Costs															
4	D Other Costs															
5	E Admin Cost															
	YEARLY SUB TOTAL (YST-1)	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5	1+2+3+4+5
	2nd Project Year															
6	A Expert Services Costs															
7	B Active Researcher Costs															
8	C Equipment, Tools, etc. Costs															
9	D Other Costs															
10	E Admin Cost															
	YEARLY SUB TOTAL (YST-2)	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10	6+7+8+9+10
	ALL YEARS															
11	A Expert Services Costs	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6	1+6
12	B Active Researcher Costs	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3	2+3
13	C Equipment, Tools, etc. Costs	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8	3+8
14	D Other Costs	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9	4+9
15	E Admin Cost	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10	5+10
	GRAND TOTAL (GT)	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2	YST-1+2
	TOTAL CONTRIBUTION (TC-NO)		D+E of GT		F+G of GT				J+K of GT		L+M of GT					
	NET ORGANIZATIONAL CONTRIB (NOC -NO)										Fill shaded area considering self contribution and contribution to other partner budget					
	NET OTHER EXTERNAL/PERSONAL CONTRIBUTION (NEC-NO)												Fill shaded area considering personal contribution and contribution from other external sources, exclude partner contribution			

Add remarks column and indicate the other source of contribution, partners or external source, with amounts, and any other remarks

6. The Justification for the Importance of the R&D Project

Explain why the project is important and should be funded by the Programme, specifically justifying the following aspects of the Project.

6.1. Short Term, Multiplier, and Long Term Effects of the Project

[Describe. Refer to section 3.4.3.]

6.2 Relevance to the RenewableNepal Programme Objectives

[Describe. Refer to sections 1.1, 1.2, 1.7, 1.8, and 3.1.]

6.3 Project Implementation Capability of the Partnership

[Present the justification that the project can be implemented effectively by the Partnership in accordance to the Work-Plan, from the viewpoint of the technical and management experience or capability and the resource availability. Refer to sections 3.4.1 and 3.4.4.]

6.4 Budget and Funding Plan

[Present the justification that the funding plan is realistic and project can be implemented effectively with the funding plan or budget. Refer to section 5 of the application.]

7. Risks and Risk Mitigation

List out or explain the risks associated with the Project and how they might be mitigated.

8. List of Attachments

The following are required attachments and shall be listed here.

8.1 Detail Budget or Project Funding Plan. Refer to section3.4.7. Contact the Programme Office for the format at the time of application.

8.2 CV of all major personnel in the prescribed format. See the format

8.3 Short organization profile of all participating organizations in the prescribed format

8.4 Letter of intent of cooperation from all partner organizations, see the sample

8.5 If Nepalese Industry Partner is not able to contribute or commit to contribute to the 20% of TPF/TPB requirement in the presented budget, the letter indicating the reason must be attached.

8.6 The signed project application summary

The following is optional.

Any other justification or other important reference strengthening the project application

4.2.2 Formats or References for the Attachments to Project Application

The formats or references for the attachments are provided in the next pages.

Table 20: Format for Curriculum Vitae

RenewableNepal	Curriculum Vitae

A. Personal Details	
A.1. Name (surname first)	
A.2 Contact Email & Phone	
A.3. Date of Birth	
A.4. Nationality	
A.5. Civil Status	
A.6. Organization	
A.7. Position in the Organization	
A.8. Years with the Organization	

B. Proposed Position in the Project	

C. Educational/Professional Studies Followed by Other Studies/Training (in chronological order)			
Institution	From	To	Degree/Diploma in Subject

D. Major Professional Experience (In Chronological Order)				
Organization	Position	From	To	Responsibilities in Brief

E. Key Qualifications Relevant to the Project Application
Describe and/or list.

Table 21: Format for Organization Profile

SINTEF Norad Cooperation RenewableNepal	ORGANIZATION PROFILE
A. Position in the Project	**Project Owner (Principal Applicant) or Project Partner**
B. Organization Details	
B.1. Name of Organization	
B.2. Address	
B.3. Date of Establishment	
B.4. Type of Organization	
B.5. Primary Business	
B.6. Head of Organization	
B.7. Designation	
B.8. Contact Address of the Head	
C. Major organizational experience (in relation to the project application)	
List or describe. Focus on scientific, technical, and R&D management experience.	
D. Relevant organizational resources: human and infrastructure (in relation to the project application)	
List or describe. Focus on what could be expected to be available for the project.	

Sample Letter of Intent

[On the Official Letter Head of the Organization]

Date: dd/mm/yyyy

To

RenewableNepal Programme
KU-SINTEF-NORAD Cooperation
Kathmandu University
Nepal

Subject: Letter of Intent of Cooperation Regarding the Project Application

[Name of the Partner Organization] has carefully read the R&D Project Application jointly prepared by *[Name of the Principal Applicant]* for submission to RenewableNepal for funding support. In relation to the application:

1. We duly understand our role and obligations, as described in the Project Application.
2. We duly understand the framework of RenewableNepal Programme, as described in the Programme Handbook.
3. We intend to cooperate with the Applicant and the other Project Partners for an equitable/agreeable distribution of (a) Intellectual Property Rights of intellectual wealth generated during the project, (b) equipments, and (c) durables purchased under the Project with majority Programme Funding.
4. We intend to cooperate with the Applicant and the other Project Partners to reach to an agreement in any matter related to the project implementation, amicably.

Sincerely

[Signature of the Head of the Partner Institution or Authorized Person]
[Name of the Person]
[Position of the Person in the Organization]

Table 22: Format for Project Application Summary

SINTEF Norad Cooperation RenewableNepal

PROJECT APPLICATION SUMMARY

A. DETAILS of PRINCIPAL APPLICANT			
Institution & Location:			
Principal Applicant:		Project Leader:	
Designation:		Designation:	
E-mail:		E-mail:	
Phone:		Phone:	

B. DETAILS of PARTNERS			
1. Organization: Activity Leader:		2. Organization: Activity Leader:	
3. Organization: Activity Leader:			

C. Project Title: (3 lines max)						
D. Duration	From:		To:		Duration in Years:	
E. Project Objectives: (3 key objectives)						
F. Project Summary (15 lines max)						

G. FUNDING PLAN SUMMARY (In approximate NOK, round figure)						H. Signature and Official Seal of Applicant	
Funding Source	Budget for All Participants				TOTAL		
	PO-NPRI	NPEI	NORI	NOEI			
Programme Funding						Official Seal of the Applicant Institution	
Self Contribution							
Other Contribution							
TOTAL							
Net Organizational Contrib.						Signature	
Net External Contrib.						Date:	

I. TO BE FILLED BY THE PROGRAMME OFFICE			
Application ID:		Date of Receipt:	
Thematic Area:		Partnership Category:	

4.3. The Project Application Evaluation and Award Procedure

4.3.1. The Project Application Evaluation

The project applications submitted in a complete form are evaluated with a 10 point marking system for their quality as indicated in Chapter 2, Table 5. The project application is first evaluated by the Programme office on the following criteria. The evaluation will be based entirely on the submitted documents.

1. Relevance of the Application in relation to the Programme objectives including gender issues [Relevance to the Programme]
2. Quality of budget and its effectiveness [Quality of the Budget]
3. Capacities and resources of the industries and institutions relevant to the application [Organizational Capacities]
4. Qualification of Human Resource, particularly of Project Leader, Activity Leaders, and Principal Researchers [Human Resource]
5. Overall quality of the Application [Overall Quality]

The Programme Office therefore does not look at the details of the R&D merits.

The applications that obtain an average mark of 6.0 “Good on Quality” or above are then short listed for further processing. In accordance to the number of projects planned to be awarded in a particular application call in various thematic areas, the number of applications selected for further review are generally at least twice the number of projects planned to be awarded. The SC members of KU and SINTEF will be consulted if there are many high quality applications and/or if there are too many on one area and too less on the other. A list for further review will be then prepared. The

The selected applications are then forwarded to Independent Expert Reviewers for the review. The independent reviewer will then look into the details of the R&D merits of the Application. The Independent Expert Reviewer will evaluate the application in the following 3 criteria.

1. Quality of R&D Concept and Content
2. Appropriateness of Methodology and Actions
3. Overall Quality of the Application

Independent reviewers are provided with a remuneration of NOK 1,000 equivalent amount, as a token of appreciation for their review work.

Simultaneously, the short listed applications are sent to one of the SC member, not directly related with the application. The evaluation of the SC member is then obtained. The SC member will award mark on “Overall Quality” only.
The Programme Office then prepares the ranking of the short-listed application according to the marks obtained in the three party evaluations. It identifies strength, weakness, opportunities that the project could provide for the society, and threats to the success of the project from the comments. And, then presents these to the SC for award decision.

Table 23: Format for Project Application Evaluation by the Programme Office

SINTEF Norad Cooperation RenewableNepal	**PROJECT APPLICATION REVIEW FORM - Programme Office**

A. Application Details	
A.1. Application ID	
A.2. Applicant Institution	
A.3. Partner Institutions	

B. Reviewer Details	
B.1. Name	
B.2. Title or Designation	
B.3. Organization	
B.4. Address of Organization	
B.5. Reviewer's E-mail Address	
B.6. Reviewer's Phone Number	

C. Declarations (Tick on left)	
C.1	I am not related to this and other project applications, submitted to RenewableNepal in this particular application call, in a way that inhibits me making an impartial judgment on this application.
C.2	I will put my utmost effort to maintain the confidentiality on this application document and erase/destroy the application document from my personal possession permanently as soon as the assessment is over.
C.3	I will refrain from using any original concept presented in this application without prior consent of the applicant.

D. Reviewer's Evaluation (Marking Guide: Excellent=10, Very Good=8, Good=6, Fair=4, Poor=2, Worse=0)

Evaluation Criteria	Relevance to the Programme	Quality of the Budget	Organizational Capacities	HR Qualifications	Overall Quality
Marks					

E. Overall Comments from the Reviewer (Maximum 20 lines)

Signature of Reviewer	Date & Place	For RenewableNepal Office Use	
		Date of Receipt	Reference

Table 24: Format for Project Application Evaluation by the Independent Expert Reviewer

SINTEF Norad Cooperation RenewableNepal	**PROJECT APPLICATION REVIEW FORM - Independent Expert Reviewer**

A. Application Details	
A.1. Application ID	
A.2. Applicant Institution	
A.3. Partner Institutions	

B. Reviewer Details	
B.1. Name	
B.2. Title or Designation	
B.3. Organization	
B.4. Address of Organization	
B.5. Reviewer's E-mail Address	
B.6. Reviewer's Phone Number	

C. Declarations (Tick on left)	
C.1	I am not related to this and other project applications, submitted to RenewableNepal in this particular application call, in a way that inhibits me making an impartial judgment on this application.
C.2	I will put my utmost effort to maintain the confidentiality on this application document and erase/destroy the application document from my personal possession permanently as soon as the assessment is over.
C.3	I will refrain from using any original concept presented in this application without prior consent of the applicant.

D. Reviewer's Evaluation (Marking Guide: Excellent=10, Very Good=8, Good=6, Fair=4, Poor=2, Worse=0)

Evaluation Criteria	Quality of R&D Concept and Content	Appropriateness of Methodology and Actions	Overall Quality of the Application
Marks			

E. Overall Comments from the Reviewer (Maximum 20 lines)

Signature of Reviewer	Date & Place	For RenewableNepal Office Use	
		Date of Receipt	Reference

Table 25: Format for Project Application Evaluation by the SC Member

SINTEF Norad Cooperation RenewableNepal	PROJECT APPLICATION REVIEW FORM - SC Member of the Programme

A. Application Details	
A.1. Application ID	
A.2. Applicant Institution	
A.3. Partner Institutions	

B. SC Member Reviewing the Application	
B.1. Name	
B.2. Title or Designation	
B.3. Primary Employment Organization	
B.4. Reviewer's E-mail Address	
B.5. Reviewer's Phone Number	

C. Declarations (Tick on left)	
C.1	I am not related to this and other project applications, submitted to RenewableNepal in this particular application call, in a way that inhibits me making an impartial judgment on this application.
C.2	I will put my utmost effort to maintain the confidentiality on this application document and erase/destroy the application document from my personal possession permanently as soon as the assessment is over.
C.3	I will refrain from using any original concept presented in this application without prior consent of the applicant.

D. SC Member's Evaluation (Marking Guide: Excellent=10, Very Good=8, Good=6, Fair=4, Poor=2, Worse=0)	
Mark on Overall Quality of the Application	

E. Overall Comments from the Reviewer (Maximum 20 lines)

Signature of Reviewer	Date & Place	For RenewableNepal Office Use	
		Date of Receipt	Reference

4.3.2 The Project Award Procedure

The Project Award decision is generally made at the Spring SC meeting, held in Norway, at the end of May.

The Programme office presents the following at the meeting.

1. The ranking of the short-listed applications according to the marks obtained in the three party evaluations (Programme Office, Independent Expert Reviewer, and SC Member)
2. The SWOT of the applications
3. Recommendations on total funding to be approved, mandatory changes required, and other aspects associated with the project

The SC Meeting discusses the applications presented and decides on programme funding and changes required or recommended. The decision is recorded as the meeting minutes.
The minute has the offer list, offer conditions in brief, waiting list, and offer conditions for the waiting list in brief.

As soon as the meeting minute is finalized, the applicants are notified about the result of the decision. The offer conditions shall generally be acceptable to the project. The Programme Office may negotiate upon the conditions with the Project Applicant.

A time limit is specified to finalize and sign the Project Contract. If the Project Contract could not be signed between the Programme and the Project Applicant by the deadline, the offer goes to the first project on the waiting list.

The Programme prefers that the Project Consortium Agreement between the partners is also finalized before the signing of the Project Contract. Moreover, some time may be provided for signing of the Project Consortium Agreement after signing of the Project Contract. The project can only start after the Consortium Agreement is signed. A deadline for the signing of Project Consortium Agreement is mentioned in the Contract. If the Project Consortium Agreement is not signed between the Partners by the Deadline and the Programme does not see the possibility of getting the Agreement signed between the Partners that are very crucial for the project implementation, then the project award decision may be cancelled by the Programme. The offer is then made to the waiting list.

If there are any major changes required from the original application (apart from that resulting from the offer decision) due to the practicalities associated with the Project Applicant and the Partners, then the award decision may be adjusted or cancelled by the Programme Office in consultation with the SC members representing KU and SINTEF.

In accordance to the Programme Agreement, the SC of the Programme has the absolute authority in awarding the projects and it may exercise its authority overriding the above general procedure.

The Project Contract Format and reference for Project Consortium Agreement are provided in the next Chapter.

Chapter 5

Project Contracting and Implementation

5.1. Project Contracting

The contents of the Project Contract are presented here in the original format, from next page. At places, short descriptions and filling instructions are provided. While filling the Contract, all the instructions indicated in italics within the brackets [ ] must be replaced with appropriate contents, removing the brackets too. Rest in italics are just instructions, they are simply removed without any replacements.

The Project Contract consists of two sections.

SECTION A: The Research and Development (R&D) Project Contract

This is the public part of the Project Contract.

SECTION B: The Description of the Project

This is "Restricted Confidential" unless specified as public in the articles.

The contract may be filled by referring to the Project Application with ease.

The contract is first filled by the Project Owner in consultation with the implementation Partners, referring to the Project Application and the Project Award Decision. Certain minor adjustments in the Work Plan, Schedule, and Budget from that presented in the Application are allowed to be made while filling the contract. The completed contract is then sent to the Programme for approval. The contract is ready to be signed after approval from the Programme. The Programme generally will look into the details of the contract referring to the general terms and conditions, the award decision, and the main application.

SECTION A

The Research and Development (R&D) Project Contract

Article A.1: General Condition of this Contract

This Research and Development (R&D) Project contract is signed in Article A.8 between the following contracting parties (Article A.2) in relation to the Research and Development Project described in SECTION B of this document, whereby the Project Owner has the obligation to execute the Project in accordance to the conditions mentioned in this contract, the Project Description, the General Terms and Conditions for Research and Development Project under RenewableNepal Programme Framework, any documents mentioned in Article A.4, and any subsequent amendments agreed between the contracting parties.

The contract is signed because the Project Owner Organization applied for the funding support from RenewableNepal Programme to execute this R&D Project described in the Project Application (Application ID: *[such as RENP-10-05-AID-100]*) within the RenewableNepal Programme Framework. The Programme accepted the application, processed the application, and finally decided to award funding support to the Project according to the decision made by the Steering Committee of the Programme on *[date]*.

This contract will be in force from the Date of Start of the Project Activity till the closing of the Project between the contracting parties, which shall be no later than 31 October 2013. Closing of the Project between the contracting parties includes the time required for final reporting, approval of the final reports and declaration of closure of the Project by the contracting parties, which is normally within 3 months from the Date of End of the Project Activity.

The Project Owner of this contract is under obligation to enter into a "Project Consortium Agreement," in relation to the execution of the Project, with the Project Implementation Partners (Article A.3), and get it approved by the Programme before the Date of Start of the Project Activity. Failure to reach to a "Project Consortium Agreement" and getting it approved from the Programme by the Date of Start of Project Activity will automatically make the contract VOID.

The Programme will be under obligation to provide all the eligible and the Programme approved cost of execution of this R&D Project from the Date of Start of the Project Activity (*[date]*) to the Date of End of the Project Activity (*[date]*), in accordance to the approved Work Plan & Schedule, Budget and the Expenditure Reports, not exceeding the total funding limit set in the decision made by the Steering Committee of the Programme on *[date]* regarding this R&D Project, which is NOK *[amount in figures]* (*[amount in words]*), at a flat rate of 1NOK=12 NRs. when conversion is required.

The Project Owner will be under obligation to bear all the costs of activities by it related to this Project before the Date of Start of the Project Activity and after the Date of End of the Project Activity, as necessary.

Article A.2: The Contracting Parties

The contracting parties are described in Article A.2.1 and A.2.2.

Article A.2.1: The Programme

Renewable Nepal Programme

Brief Description of The Programme: A Programme for Research Based Industrial Development in Nepal, jointly managed by Kathmandu University, Nepal, and SINTEF Energy AS, Norway, and funded by Norwegian Agency for Development Cooperation (NORAD), represented by the Royal Norwegian Embassy at Kathmandu.

Programme Owner: Kathmandu University, Nepal

Contract Signing Authority: The Programme Manager

Article A.2.2: The Project Owner

[Name of the Organization and Country]

Brief Description of the Organization: *[Describe the nature of the Applicant Institution in one or two statements]*

Executive Head of the Organization and Designation: *[Enter the name of the executive head of the organization and designation of the executive head]*

Project Contract Signing Authority: *[Enter the name and designation of the person who will sign the project contract]*

Project Administrator: *[Enter the name and designation of the Project Administrator]*

Project Leader: *[Enter the name of the Project Leader, designation, contact addresses including official e-mail address, official postal address, office phone number, and mobile number if available and willing-to-provide]*

Article A.3: The Project Implementation Partners

The Project Implementation Partners of the Project Owner are described in Article *[A.3.1, A.3.2, and A3.3]*. *Enter the detail for each partner sequentially as Article A.3.1, Article A.3.2, and so on.*

Article A.3.1: ***[Type of Partner such as Main Nepalese Industry Partner]***

[Name of the Partner Organization and Address]

Brief Description of the Organization: *[Describe the nature of the organization in one or two statements; it shall be a research organization or industry related to renewable energy sector*]

Executive Head of the Organization and Designation: *[Enter the name of the executive head of the organization and designation of the executive head]*

Project Consortium Agreement Signing Authority: *[Enter the name and designation of the person who will sign the Project Consortium Agreement with the Project Owner and Other Partners]*

Activity Leader: *[Enter the name of the Activity Leader of the organization, designation, contact addresses including official e-mail address, official postal address, office phone number, and mobile number if available and willing-to-provide]*

Article A.4: The Integral Documents to the Contract and References

The contract includes this signed agreement consisting of two sections (SECTION A and B), and as a minimum the following documents, which are integral parts of this contract.

1. The General Terms and Conditions for Research and Development Project under RenewableNepal Programme Framework , Chapter 2 of the Programme Handbook
2. The Project Consortium Agreement between the Project Owner and the Project Implementation Partners

During the project period, the most recent version of the General Terms and Conditions for Research and Development Project under RenewableNepal Programme Framework will prevail at all times. If questions pertaining to the contract should arise after the expiry of the project period, the provisions of the last version that was valid during the relevant project period will apply.

Amendments agreed between the contracting parties in writing subsequent to the signing of the contract shall also be part of the contract and shall take precedence according to the date of amendment over other contract documents.

The contracting parties may refer to the following documents if necessary.

1. The RenewableNepal Programme Handbook
2. Agreement between KU and NORAD regarding the RenewableNepal Programme
3. Agreement between KU and SINTEF regarding the RenewableNepal Programme
4. RenewableNepal Programme Application made by KU to NORAD
5. The public part of the minutes of the Steering Committee Meetings of the Programme

The most recent amendments to the above documents or the most recent versions of the documents shall take precedence over the older documents.

The contracting parties shall refer to the following documents as necessary.

1. The Call for Project Application *[month and year such as April 2010]*
2. The Project Application (Application ID: *[App. ID such as RENP-10-05-AID-100]*)

In case of conflict in any items between the documents, the description in the most recent document will prevail, provided the recent version of the document has been approved by an appropriate authority.

Article A.5: Confidentiality and Content Distribution

The SECTION A of the contract is considered public and could be made available to anyone by the Programme or the Project Owner. The SECTION B regarded as "Restricted Confidential", which could be accessed on this Project related specific purpose by KU, SINTEF, NORAD, The Royal Norwegian Embassy (Kathmandu), the Project Implementation Partners and persons designated by these entities; through the Programme or the Project Owner. The items explicitly mentioned as public in SECTION B only can be distributed without restriction. Other "Restricted Confidential" documents mentioned in this contract will also be treated in similar manner. Access to the "Restricted Confidential" documents specific to this R&D Project by a third party requires mutual consent of the Programme and the Project Owner. Part of the "Restricted Confidential" document if specified as public may be made public or distributed to a third party, in an extracted form. Any original R&D content reflected in this contract and associated documents (Project Application, Reports) having a possibility of being intellectual property of the Project may not be used by anyone without prior consent from the Project Owner. The Project Owner may be required to take the consent of the Partners if so specified regarding intellectual property management of the Project in the Project Consortium Agreement.

Article A.6: Interpretation of the Contract and Related Documents

The Programme Office is the primary entity that explains or defines the interpretation of this contract, any other documents that are mentioned in this contract, or any other document that may be related to this Project contract, as long as the execution of this contract is concerned.

Article A.7: Dispute Settlement

Disputes between the contracting parties that may arise in connection with the Contract or a result thereof shall be settled by private negotiations between the Programme Office and the Project Owner. If such agreement cannot be obtained within a reasonable time period, then the dispute will be handled by the Steering Committee of the Programme at one of the scheduled time of the Steering Committee Meeting of the Programme. The decision of Steering Committee will be final and cannot be challenged further, unless the Project Owner chooses a legal venue for the dispute settlement or the Steering Committee advises the Programme Office to choose a legal venue for the settlement of the dispute.

Disputes between the Project Owner and the Project Implementation Partners that may arise in connection with the Contract or a result thereof shall be settled by private negotiations between the Project Owner and the Project Implementation Partners, referring to the Project Consortium Agreement. The Programme will not handle the matter related to the settlement of dispute between the Project Owner and the Project Implementation Partners in relation to the Project.

Article A.8: The Signing of the Contract

This Contract has been signed in 2 copies, one for each contracting party, for the execution of the R&D Project under RenewableNepal Programme Framework according to the primary conditions mentioned in the preceding Articles of this section, SECTION A.

Article A.8.1 Signature on behalf of the Project Owner and Official Seal of the Organization

With due permission from
The Executive Head of the Project Owner Organization: *[Name of the Head]*
Name and Designation of Contract Signing Authority: *[Name and Designation]*

Signature Official Seal of Organization

Article A.8.2 Signature on behalf of the RenewableNepal Programme and Official Seal of Kathmandu University

Under the provision of the Programme
Name and Designation of Contract Signing Authority: *[Name]*, Programme Manager

Signature Official Seal of Kathmandu University

Article A.8.3 Date and Place of Signing of the Contract and Witness

This contract has been signed on *[date and day 30 June 2010 (Wednesday)]* at *[Place such as Kathmandu University, Dhulikhel Campus Premises]* in the presence of the following persons.
[List of witnesses, generally the representatives of the partner organizations in Nepal]

SECTION B [Restricted Confidential Unless Specified]

The Description of the Project

The project is described in the project application submitted to the Programme by the Project Owner Organization (Application ID: *[Enter Application ID such as RENP-10-05-AID-100]*) in *[Month and Year]*, and the subsequent updates approved by the Programme including any updates reflected in this section.

Article B.1: Project ID [public]

[RENP-10-06-PID-100]

Article B.2: Project Title [public]

[Enter Project Title]

Article B.3: Project Summary [public]

[Enter project summary. Refer to Section 4.2 Main Application Article 1.6]

Article B.4: Project Duration, Start and End Date [public]

Project Duration: *[Enter project duration in years]*

Project Activity Start Date: *[Enter project start date such as 01 July 2011]*

Project Activity End Date: *[Enter project end date such as 30 June 2013]*

Article B.5: Objectives of the Project [public]

[Enter key project objectives. Refer to Section 4.2 Main Application Article 1.5]

Article B.6: Description of the Project

[Describe the project in about 2 pages. Describe the major research content and methodology of project implementation. Refer to Section 4.2 Main Application Articles 2 and 3.]

Article B.7: Work Plan and Schedule

Article B.7.1: Project Work Plan

[Present the Work Packages in details. Refer to Section 4.2 Main Application Article 4.1. This is the work plan adjusted according to the offer decision and considering other practicalities arising after the project award.]

Article B.7.2: Project Schedule

[Refer to Section 4.2 Main Application Article 4.2.]

Article B.7.3: Project Milestones, Deadlines, and Important Dates

[Refer to Section 4.2 Main Application Article 4.3.]

Article B.7.4: Human Resource Plan

[Refer to Section 4.2 Main Application Article 4.4.]

Article B.7.5: Other Resources Plan

[Refer to Section 4.2 Main Application Article 4.5.]

Article B.8: Project Budget

The Project Budget in NOK for this R&D project inclusive of all applicable taxes and duties is as given in the table, out of which, the funding available to the Project from the Programme is NOK*[Enter the amount in figure]* (*[Enter the amount in words]*) in total.

[Refer to Section 4.2 Main Application Article 5. Make adjustments to the budget according to the offer decision and changes in work-plan after the award. Note that the Programme Funding part total shall exactly match the award decision. Further, the Programme will contract only when the budget distribution satisfies the conditions specified in the General Terms and Conditions, Chapter 2, Table 4.]

[Present the adjusted content of Main Application Articles 1.7, 5.1, and 5.2]

Article B.9: Project Outputs

[Refer to Section 4.2 Main Application Article 4.6.]

Article B.10: Risks and Risk Mitigation

[Describe the risks with this project and mitigation strategy. Refer to Section 4.2 Main Application Article 7]

5.2. Project Consortium Agreement Reference

This section presents the reference for Project Consortium Agreement. The contents and conditions may be modified to suit the partnership.

The Project Consortium Agreement is finalized by the Consortium (Project Owner and Partners) and sent to the Programme Office for approval. The Agreement is signed after the approval.

The reference is provided from the next page.

While filling the Agreement, all the instructions indicated in italics within the brackets [ ] must be replaced with appropriate contents, removing the brackets too

Project Consortium Agreement

between

Project Owner: *[Name of the Project Owner Organization]*

and

Project Partners: *[Names of Project Partner Organizations]*

regarding

collaboration in the execution of the R&D Project *[Enter project ID]*

under

the RenewableNepal Programme Framework

Whereas:

1. The Project Owner applied for R&D Project funding support from RenewableNepal Programme in *[Date of Application]* as described in the Project Application with Application ID *[Application ID]*
2. The Project Partners indicated the interest in collaborating for the Project Execution with the Project Owner with the letters of intent attached to the Project Application
3. The RenewableNepal Steering Committee decided to award funding support to the R&D Project on *[Date of Decision]*.
4. The Project Owner and the Programme signed a Project Contract with the consent of Project Partners on *[Date of signing of the Contract]* to execute the R&D Project as described in the Project Contract and the Project Application; and in accordance to the General Terms and Conditions for Research and Development (R&D) Project under RenewableNepal Programme Framework.
5. The Project Owner and the Project Partners, according to Article A.1 of the Project Contract, are under obligation to enter into a "Project Consortium Agreement" in relation to the execution of the Project and get it approved by the Programme before the Date of Start of the Project Activity, *[Date of Start of Project Activity]*.

Now therefore the Project Owner and the Project Partners (the Parties) agree to form a Project Consortium and enter into Project Consortium Agreement as follows:

Article 1: Scope and objectives

This Agreement sets forth the terms and conditions of the Parties' which pursues the following Goal and Purpose in relation to the Collaborative R&D Project described briefly in Article 2 and elaborately in the Project Contract:

1. To execute the Project effectively and efficiently according to the collaboration indicated in the Work Plan, Schedule and Budget as defined in the Project Contract between the Project Owner and the Programme and any subsequent updates to it, under the Programme Framework.
2. To achieve the project objectives defined in the Article 2 in line with the basic Programme objectives which are:
   a. Industrial development in Nepal with aim of commercialization of Products and Services developed in the Project
   b. Institutional competence development in Nepal through the applied R&D conducted under the Project to be able to serve Nepalese industries in long term in utilizing Nepal's renewable energy resources while contributing to socio-economic development of Nepal in the environment friendly and sustainable manner.

c. Promotion of women in research
3. To share the benefits of the Project between the Parties in a proportionate manner.
4. To continuously monitor the progress of the Project and take necessary decisions in relation to the collaboration.

Article 2: Brief Description of the Collaborative Project

1. Project title: *[Specify the project title]*
2. Major project objectives:
   i. *[Project Objective 1]*
   ii. *[Project Objective 2]*
   iii. *[Project Objective 3]*
3. Project ID: *[Enter project ID]*
4. Project activity start date: *[Date]*
5. Project activity end date: *[Date]*
6. Project closing date: *[Deadline should be no later than 31 Oct 2013]*
7. Total project funding from the Programme: NOK *[Amount in figure and words]*

Article 3: Overall Project Management

The Project Owner is the main responsible organization for the planning, administration and implementation of the Work Plan defined in the Project Contract and subsequent updates to it, including adherence to budgets and decisions related to the collaboration between the Parties. The Project Leader shall be the main responsible from the Project Owner for the responsibilities for overall technical and administrative matters related to the execution of the Project. The Project Administrator shall be main responsible for monitoring and evaluation of the Project and the decision making on behalf of the Project Owner organization in relation to the Project execution.

The Activity Leader of the partner organization with representation in the Consortium is responsible for all technical and administrative activities in the partner organization in relation to the execution of the project. The activity leader will regularly communicate with the project leader for the Project related matters. The activity leader of the partner organization is an interface between the project and project partner organization executive body. The activity leader has the authority to employ project staffs and authorize all financial transaction related to the project in the partner organization, with the permission from the project leader. The Activity leader of the Partner organization shall not be confused with a general activity leader assigned to lead activities in the work plan of the project.

Article 4: The Project Consortium

1. The Project Owner and the Project Partners shall set of a Consortium represented by the *[Enter representatives such as Project Administrator, the Project Leader, and One Activity Leader from each Partner]* as defined in Article 5.
2. The consortium is the main decision making body in relation to the collaboration in the R&D Project Execution.
3. The Consortium shall meet *[meeting frequency such as at least every 6 month]* regularly in connection with the reporting of the Project to the Programme, to discuss all aspects related to the collaborative execution of the Project, such as but not limited to work plans, reports and budgets. In the regular meeting, all local (Nepalese) members of the Consortium shall meet in person; the Norwegian partners may visit Nepal for the meeting depending upon convenience and budget, otherwise the Project Leader arranges to obtain the Norwegian Partner's opinion on the agenda. Extraordinary meetings can be held at any time upon written request from one of the Parties. Such

meetings may be held by e-mail, internet, telephone conference or other modes of telecommunication.

a. The Project Leader shall convene and chair the meetings.
b. Any agenda items requiring a decision by the Consortium must be identified as such on the agenda. The agenda in regular meeting should at least include the following.
    i. Internal evaluation of project progress by the consortium
        1. Work plan and schedule versus actual work
        2. Budget versus expenditures
        3. Assessment of overall development of the Project and efficiency of the Project
        4. Assessment of the efficiency of the collaboration
    ii. Problems in collaboration and measures to handle the problems
    iii. Updates in work plan, schedule and budget related to the collaboration
    iv. Amendments to the consortium agreement
c. Agenda shall be sent by the Project Leader to all the members of Consortium 7 days before the meeting is held.
d. All decisions shall be taken unanimously.
e. The Project Leader shall produce written minutes of each meeting which shall be the formal record of all decisions taken. The minute may be finalized by the end of the meeting OR the Project Manager shall send a draft of the minutes to all parties within 3 days after the meeting. If the Parties do not respond to the minutes within 2 days of sending, the minute is assumed to be accepted by the Party. The final minute signed by the Project Leader shall be sent thereafter to all the Parties including the Programme.
f. If required, the Consortium Members are responsible to take prior consent of the respective organizations in making any decision regarding the Project.

Article 5: Representation in the Consortium

The Project Owner and the Partners are represented in the Consortium by the following persons. *Enter the following as applicable to the project. The following are generally required. Additions may be made.*

1. Project Administrator: *Enter Name]*
2. Project Leader: *[Enter Name]*
3. Activity Leader from Partner 1: *[Enter Name]*
4. Activity Leader from Partner 2: *[Enter Name]*

The members are formally employed in the Project with Employment Contracts defining the Consortium related and Project related responsibilities, terms, and conditions. The employment will in general be for the entire project period.

Article 6: Obligations and Responsibilities of the Parties

The obligations of the Project Owner and Partners related to the Project execution are specified in the General Terms and Conditions for Research and Development (R&D) Project under RenewableNepal Programme Framework.

The Parties shall make available access to and use of reasonable resources available at the respective organizations in relation to the Project at reasonable/minimal costs. The parties shall also assist in arranging visits to each other's premises or sites and arranging for reasonable logistics during such visits.

The Parties shall make available sufficient and qualified personnel which shall carry out their work with the highest professional standards. If any problem arise or is expected to arise, the Party concerned shall notify the other Party immediately in writing. Should it become necessary

to replace personnel, the Party concerned shall arrange for replacement with a person with comparable experience.

Any contributions from one of the Parties to the other have to be supplied at the time and of the quality that have been agreed on to enable that Party to comply with the Project work plan, schedule, and budget.

The parties shall contribute to all Reports from the project.

Article 7: Communications between the Parties

In general, the Parties shall keep each other informed about all matters of importance to the overall cooperation and the implementation of the tasks to be performed jointly related to the Project. Each Party undertakes to notify each other promptly about any significant information, facts, problems or delays likely to affect the Project.

The Project Leader and the Activity Leaders representing in the Consortium shall be in consistent touch with each other via e-mails, telephone, internet, or any other suitable means of communication.

The Project Leader and the Activity Leaders shall meet regularly to discuss the developments in the Project and to take any immediate steps or minor decisions, mainly related to the collaborative R&D activities in context. Any major decision shall however be taken in the formal consortium meeting.

Article 8: Entry into Force, Duration, and Termination

An entity becomes a Party to this Consortium Agreement upon signature of this Consortium Agreement by a duly authorized representative.

This Consortium Agreement shall have effect from the Project Activity Start Date till the deadline of Closing of the Project between the Project Owner and the Programme.

If the Project develops unfavourably in terms of Partnerships, this Consortium Agreement or the participation of one or more of the Partners to it may be terminated by the Project Owner in agreement with the Programme. Upon receipt of such notice of termination of partnership, the Project Owner and Partners shall exert their best efforts to bring the ongoing partnership work to an end in a rapid, orderly and economical manner. The partner/partners with agreement terminated must close down the project activities at the respective organizations following the procedure below, within TWO MONTHS.

1. Clearing of all financial and accounting obligations towards the Project Owner in relation to the Project.
2. Rapidly bring the R&D work to an end at the Partner organization and submit all results of the R&D works conducted/held by the partner/partners in relation to the Project to the Project Owner.
3. Obtain transfer of ownership from the Programme for the durables purchased by the partner under the Project with majority Programme funding OR return the durables purchased by the partner with majority Programme funding to the Project Owner, in accordance to the directions from the Programme.

If all the Parties agree on early termination of the Agreement, the partners shall follow the procedure above to close down the Project Activities at the respective organizations, in a rapid, orderly and economical manner.

In the event of a breach by a Party of its obligations under this Consortium Agreement or the Contract or the General Terms and Conditions of the Programme, the matter should be brought

into the notice of the Consortium and if needed the Programme. Such breach should be remedied within ONE MONTH. If such breach is substantial and is not remedied within the period designated, or the breaching party is not capable of remedy, the Consortium and/or the Programme may decide the consequences thereof.

In the event of termination of agreement, the Partners have Access Rights to Project Results held by the Party, for its own use.

The consortium is not entitled to decide the termination of the Project. Termination of project is the decision that entirely lies between or with the Project Owner and the Programme. If the Programme or the Project Owner decides to terminate the Project, the Project Owner and Partners shall enter into the termination procedure and shall terminate the project within THREE MONTHS.

Article 9: Addition of Partners to the Consortium

The Consortium shall decide whether or not to accept new Parties in the Consortium. Once accepted by the existing Consortium and the Programme, new Parties are entitled to representation in The Consortium.

For entry of a new Party in the Consortium, an accession document shall be prepared by the Project Owner indicating updates in the Project Contract and the existing Project Consortium Agreement, along with justification for addition of the new Party indicating how the addition of the new Party contributes to the effectiveness of the Project. The Accession Document and the Justification shall be discussed in the Consortium meeting to reach to an agreement. The decision to accept a new Party requires the unanimous approval of the Consortium.

The approval of the Consortium along with the Accession Document and the Justification will be sent to the Programme for final approval. The new Party may enter the consortium upon approval by the Programme, based on approved or set terms and conditions.

The new Party enters the Consortium upon signature of the accession document by the new Party and the Project Owner. Such accession shall have effect from the date identified in the accession document

Article 10: Withdrawal of Partners from the Consortium Agreement

A Party, other than the Project Owner, may decide to withdraw from the Consortium Agreement and be exempted from further obligations pursuant to the Consortium Agreement by the Project Owner. The withdrawing Party shall send a written notice to the Project Owner with reasons for withdrawal. The withdrawing Party shall immediately enter into withdrawal procedure described as follows:

1. Clearing of all financial and accounting obligations towards the Project Owner in relation to the Project.
2. Rapidly bring the R&D work to an end and submit all results of the R&D works conducted/held by the partner/partners in relation to the Project to the Project Owner.
3. Return of all durables purchased by the Partner under the Project with majority Programme funding to the Project Owner.

The withdrawal shall be effective from the date of completion of the withdrawal procedure up to the satisfaction of the Project Owner, which shall be within TWO MONTH of the sending of the withdrawing notice by the Party.

A withdrawing Party will have Access Rights to Project Results held by the Party, for its own use.

In the event one or more Parties withdraw from the Consortium with the consequence that funding and/or essential expertise/resources are no longer available, the Consortium must seek to ensure that the Consortium has the resources needed to achieve the objectives of the Project.

Article 11: Funding of Activities in the Partner Organizations

The Programme funds will be made available to the use by the partners by the Project Owner based on the approved work plan, schedule, and budget.

All personnel costs of the partners working on the project shall be invoiced to the Project Account held by the Project Owner, on a monthly basis or on a basis defined in the Employment contract of the personnel. The personnel costs shall be invoiced based on the actual time sheet of work of the personnel and the employment contract.

The cost of services provided by the Partners on the project shall be invoiced to the Project Account held by the Project Owner, on a monthly basis. The costs must be in accordance to the service agreement with the Project Owner.

The Project Owner shall immediately respond to the invoice.

The durables and consumables may be purchased by the Partners based on the approved work plan, schedule and budget in agreement with the Project Owner. The costs of such purchase shall be reimbursed by the Project Owner based on the evidences and reimbursement request from the Partners. In needy situation, the Project Owner shall provide an advance to cover approximately 80% of the cost of planned purchase to the Partner.

Travel and field visit costs of the Partners will be reimbursed by the Project Owner based on the evidences of actual expenditures and prior agreement with the Project Owner on the travel and per diem costs. In needy situation, the Project Owner shall provide an advance to cover approximately 80% of the cost of the planned mission to the partner or personnel designated by the partner.

In case of Project with Norwegian partners, an additional Project Account may be set up in Norway partner hub organization so that Norwegian costs may be invoiced to that account. The account shall be considered a part of the Project Account held by the Project Owner.

Article 12: Employments in the Projects by Partner Organizations

The employment in the project shall follow the method specified in the General Terms and Conditions General Terms and Conditions for Research and Development (R&D) Project under RenewableNepal Programme Framework.

The partner organizations may employ personnel in agreement with the Project Owner. All employments shall accompany the formal employment contract or specific work order.

All employments should in general accompany a confidentiality agreement.

Article 13: Avoidance of Corruption

The Parties declare their commitment to counteract corrupt practices in the execution of this Agreement. Further, the Parties commit themselves not to accept, either directly or indirectly, as an inducement or reward in relation to the execution of the Agreement, any kind of offer, gift, payments or benefits, which would or could be construed as illegal or corrupt practice. Any such practice will be grounds for cancellation of this Agreement.

Any significant employment and business opportunities provided by the collaboration in the Project shall be open and competitive. Procedural details and evidences shall be submitted by the partners to the Project Owner. Local law and the regulations of respective organization shall be followed.

Article 14: Audit

Only the annual financial statements of the Project Account held by the Project Owner in Nepal and Partner Hub in Norway shall be audited. The partners shall make available documents of all financial transaction at the respective organizations to the Project Owner in Nepal and the Partner Hub in Norway.

Article 15: Contributions in Cash or Kind

All planned contributions by the Nepalese partners in cash should be made available to the Project Account held by the Project Owner. Norwegian partners make the contribution available to the Project Account in Norway.

All contributions in kind shall be reported by the partners in a manner equivalent to the normal financial transactions. The contributions will not be accounted without necessary and sufficient evidences.

The contributions planned in the budget shall be respected at all circumstances.

In accordance to the Programme framework, the Project Owner and the industrial partners should work together to make significant industrial contributions to the Project. The minimum Programme requirement of industrial contributions in cash or kind amounting at least 20% of the programme funding should be respected. Failure to make the required contributions by any Nepalese industrial partners shall be justified to the Programme.

Article 16: Distribution of Ownership of Equipments and Durables

The distribution of final ownership of equipments and durables procured under the collaborative framework with majority programme funding shall follow the principle of good partnership practice and be in line with the objectives of the Programme. The ownership of these equipments and durables shall lie with the Programme until the Project is successfully terminated. The ownership will be finally transferred by the Programme to the Project Owner and Partners, generally based on the decision of the Consortium regarding the ownership transfer. If any dispute results, the decision of the Programme shall be final.

In general, the procurement of the equipments and durables shall be conducted and these should be located with a view of final ownership transfer.

Article 17: Intellectual Property Rights

Intellectual property resulting from the collaborative R&D work shall be identified as intellectual property by the Consortium. The distribution of rights shall be mentioned in the document describing the intellectual property. The distribution of right shall be proportionate based on the overall contribution of the parties to the R&D results. The intellectual property may be made available to use by a third party based upon the decision of the consortium. During the project execution period, the intellectual property and its right management lie with the consortium.

After the termination of the project, the intellectual property and its right management shall be the responsibility of one of the party, according to the decision of the Consortium. In the event that no party is willing to manage the intellectual property and its rights, the intellectual property may be made public or may be made available to any third party by any of the parties.

The parties contributing will have Access Rights to the Intellectual Property, for their own use indefinitely.

Article 18: Transparency and Confidentiality

The project procedures and results shall be transparent to the parties. The Parties shall hold all the R&D procedures and results confidential within the party. A portion/all of R&D procedures and results may be made public or may be made available to a third party by the consortium decision only. The confidentiality of R&D procedures and results will cease after the termination of the project, unless the procedures and results are identified as intellectual property by the consortium with the property and rights managed by one of the parties.

Article 19: Dissemination of Project Results

The consortium shall seek opportunity to disseminate the Project results through appropriate media so that the R&D results can have enhanced multiplier effects in a general audience. Any publication shall be discussed in the Consortium before being sent to the media for publication so that confidentiality and protection of intellectual property are intact.

Article 20: Liability

No warranty or representation of any kind is made to the sufficiency or fitness for purpose, nor as to the absence of any infringement of any proprietary rights of third parties, in respect of any information or materials supplied by one Party to another under the Project. The recipient Party shall in all cases be entirely and solely liable for the use of such information and materials. The donor party shall mention the sources of information or materials.

No Party shall be responsible to any other Party for any indirect or consequential loss or similar damage related to the Project execution.

A Party's aggregate liability towards the other Parties collectively shall be limited to the said Party's share of the total costs (received or contributed) of the Project.

Each Party shall be solely liable for any loss, damage or injury to third parties resulting from the performance of the said Party's obligations under this Consortium Agreement or from its use of Project Results or Background knowledge.

Article 21: Force majeure

Either Party shall notify the other Parties without undue delay if Force majeure should prevent that party from fulfilling its obligations under the Contract or the Agreement. None of the Parties is to be held liable for a breach of Contract if the inability to fulfil its obligations is due to Force majeure. If the situation of Force majeure is expected to last, or has lasted, for more than ONE MONTH, the Consortium shall decide whether to transfer said obligations to other Parties.

Article 22: Settlement of Disputes

1. If any dispute arises relating to the implementation or interpretation of this Agreement, there shall be mutual consultations between the Parties with a view to secure a successful implementation of the activities referred to in this Agreement.
2. Any disputes which cannot be solved amicably shall be referred to the parties to the Programme with a view to reaching a solution.
3. Any disputes that cannot be solved amicably according to the above provisions shall be referred to the competent local court and settled in accordance with the local law.

Article 23: Precedence of Documents Related to Project Execution

The following documents shall be referred by the Parties as necessary during the Project execution. The precedence of the documents shall be as indicated by the numbering below.

1. The recent version of the Programme Handbook and any updates to it

2. The Project Contract between the Project Owner and the Programme and any subsequent updates to it.
3. This Project Consortium Agreement and any subsequent updates to it.

Article 24: Interpretation and Explanation of this Agreement

The right to interpret and explain this agreement lies with the Project Owner.

Article 25: Amendments to the Agreement

Any amendments to this Agreement shall be in writing and be signed by the Parties. Such amendments will become effective when approved by the Programme.

Article 26: Signing of the Agreement

This agreement has been signed between the Project Owner and Partners in *[number of copies]* copies by the following authorized persons.

[Signatures on behalf of all Partners]

[Name and Designation of signatory]

[Name of Organization]

Date of Signing of the Agreement: *[Date]*

5.3. Project Implementation

5.3. 1.General Considerations

The Programme has emphasized on the factor that detail work plan, schedule, and budget are available to the Project, prior to the start of project activities. This certainly will help the Project to start and proceed smoothly. Therefore, the first priority in the project implementation is to proceed according to the work plan, schedule, HR plan, other resources plan, and the budget.

Although, the above mentioned details are available, the projects are not usually expected to proceed, as defined, in practical situations. Therefore, considerable elaboration and adaptations are needed as the project is implemented. The following diagram illustrates the approach that aids the adaptation and elaboration of project work plan, schedule, and budget. This approach should be taken for adaptation and elaboration of each work-package. The adaptation and elaboration frequency may be arbitrary, depending on the situation encountered.

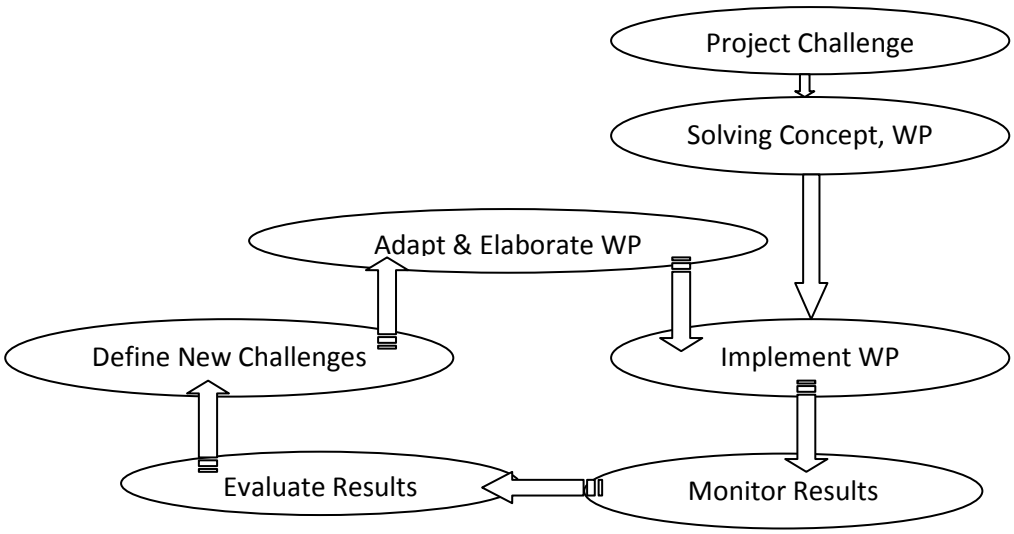

Figure 7: Adaptation and Elaboration of Work-Plan or Work-Packages

5.3. 2.Role of Resources and Priority

In the Project implementation, the most processes revolve around the performance of the Researchers. Therefore, it is very important that the researchers can work very productively and efficiently. Every other resource must be setup to facilitate the work of the researchers in a way that the project progresses smoothly and consistently. Therefore catering the need of the researchers for efficient steady progress should be the most important consideration in the project implementation.

The researchers in turn should be very clever, hardworking, motivated, devoted, and objective. Since the performance of the researchers determines the progress in the project and the overall success of the project depends on their day to day productivity and efficiency, the researcher performance shall be very consistently and objectively monitored.

The equipment, tools, materials, facilities, and other services must be readily available to the researchers to efficiently work on the work plans. Expert advices shall also be readily available at consistent frequency. Project Leader and Activity Leaders shall consistently meet with the researchers and advise and motivate them regularly. Administrators shall facilitate in creating a congenial atmosphere for the R&D work.

The single most important person in project implementation is the Project Leader, both in technical and managerial/administrative matters. The desired character for the Project Leader is summarized below.

1. The Project Leader shall ensure that the project is defined properly and completely for success, all stakeholders are engaged, work effort approach is determined, required resources are available when needed, and processes are in place to properly execute and control the project.
2. The Project Leader shall serve as the central point-of-contact for all oral and written project communications. The Project Leader shall manage all information and documentation.
3. The Project Leader shall ensure that team members who come from different perspectives understand each other and work together to accomplish the project goals.
4. The Project Leader shall work to shield the project team from the politics and "noise" surrounding the project, so they can stay focused and productive.
5. The Project Leader shall determine and communicate the role each team member plays and the importance of that role to the project success; finds ways to motivate each team member; looks for ways to improve the skills of each team member; and provides constructive and timely feedback on individual performances.
6. The Project Leader shall continuously work to identify risks and to develop responses to those risk events in advance.
7. The Project Leader shall consistently measure progress against the plan; develop corrective actions; review quality of both project processes and project deliverables.

The Activity Leaders shall take up similar role in carrying out project activities in their respective organizations. The Project Leader and the Activity Leader shall meet regularly to discuss the progress, identify problems and solutions, and make necessary adjustments in the work plan and budgets.

5.3. 3.Managing Acquisition and Procurements

It is important that the project has the resources, materials, and facilities it needs when it needs it. Resource, materials, and facilities acquisition must be carefully planned and executed. The procurement procedure shall be smooth and effective.

The procurements shall be performed in accordance with the generally accepted procurement principles, good procurement practices and the internal procurement regulations of the applicable organization, which are in accordance with the regulations of the applicable country. The Project Leader and the Activity Leaders shall understand the procurement regulations of respective organizations well and execute the procurements in accordance to the organizational regulations. All documents related to procurements and payments shall be proper and adequate.

The Project Owner and the Partners shall observe the highest ethic standards during the procurement and execution of contracts. No offer, gift, payment or benefit of any kind,

which would or could, either directly or indirectly, be construed as an illegal or corrupt practice shall be accepted by the procuring person or organization.

5.3. 4.Approach towards the Applied R&D

Conducting applied R&D objectively and efficiently inherently possesses a great challenge, particularly for young researchers. A systematic approach is therefore needed. The generally employed approach is to breakdown the R&D Work-Package objective into smaller and manageable for R&D at a time. The next step is to do some research to find or devise a suitable sub-system that can satisfy the development objective. It is required that sufficient design, analysis, experiments, and adjustments are performed on component level, so that the components satisfy the requirements or specifications of the sub-system. Next step is to implement the subsystem and evaluate its performance.

It should not be forgotten that there have already been considerable progress in most of the technologies that are related to the particular R&D that someone is carrying out in the Project. It is likely that a system or subsystem may be considered in whole or part for the development. Usually, it is necessary to do experimentations and adapt the system or sub-system to the particular requirement. This could save time, money and effort.

The applied R&D for product development is therefore is not a straightforward process. Cost effective and technologically appropriate product development required all round knowledge and experience. The Project Leader and Activity Leaders can significantly contribute in this regard. Industrial experience is very crucial, as industry generally needs to address such challenge on day to day basis. Expert contacts are vital in getting breakthrough progress.

The following diagram in Figure 8 illustrates the generally employed approach in the applied R&D product development project. The process is generally known as ADDIE process.

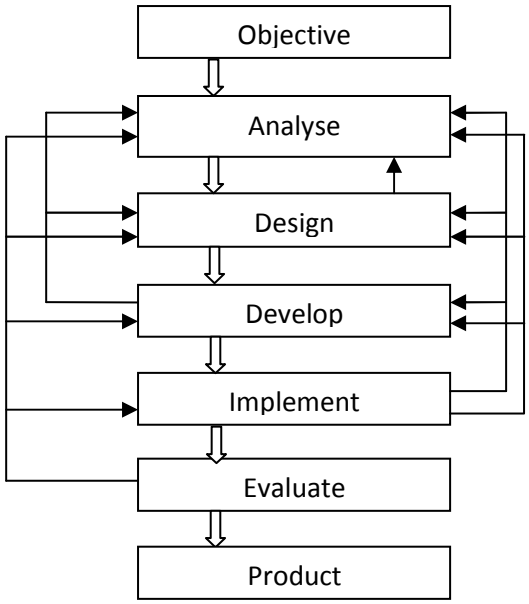

Figure 8: The ADDIE Process

In the above process, the requirements to satisfy the applied R&D product development objective is first analysed. The result of the analysis shall produce detail specifications, on the basis of which a system may be defined. The system is then designed to meet the

specifications. The designed system is experimented on component, sub-system, and system level, so that the whole system may be developed. The developed system is then developed integrating all components and sub-systems. The final system is then evaluated to check the meeting of the specification and performance requirements. If the system meets the performance requirements, then the product is developed fully. This is the normal flow of process, as indicated by the bold arrow. Note that any problem or realization of any further requirement can take the whole process back to any stage from any stage, as indicated by the normal arrows.

5.3.5. Managing Employments

The management of employments in Projects is guided by the General Terms and Conditions, Chapter 2, Section 2.2.5. The Programme recommends transparent and fair employment procedures and conditions in the Project employments, abiding by the regulations of the employer organization, place of work, and labour laws of respective countries.

The following documents are therefore necessary for all employments in the Project, reporting of the work by the employee, and the salary and benefit payments or accounting of personnel contributions (organizational or personal).

a. Employment contract or award defining salary rate, working hours, additional benefits, terms of reference, etc. as required.
b. Time sheet of work in the format as demanded by the type of employment
c. Pay-Sheet for payments or Contribution-Statement for contribution, prepared in accordance to the employment contract and time-sheet of work

It is therefore necessary that the employment classes are defined clearly. The types of employments recommended by the Programme are as follows with the following features.

1. Invoice to Project (I2P) Full-time regular employment (Normal Work Hours NWH)
    i. Example: full-time researchers
    ii. Employment: On monthly basis for a predefined period
    iii. Time-sheet: Monthly time-sheet with short statement of work for each working day of the month
    iv. Pay-sheet: Monthly
2. I2P Part-time daily employment (Normal Work Hours NWH)
    i. Example: Field data collection staff on mission or special expert/technical service for few days or labour service
    ii. Employment: On daily basis for a predefined period
    iii. Time-sheet: Short statement of work for each day worked on the period
    iv. Pay-sheet: For the assignment period
3. I2P Part-time hourly employment (Normal Work Hours NWH), most general type
    i. Example: Project Leader, Activity Leaders, Project Administrator, part time researcher, student researchers,
    ii. Time-sheet: Short statement of work each time a work is performed and time taken to perform the work (rounded to hours, ½ an hour, or ¼ of an hour as applicable) for a predefined salary payment period
    iii. Pay-sheet: For the predefined salary payment period
4. I2P Part-time hourly employment (Overtime Work Hours OWH) – for example, full-time researcher requiring extra work to meet deadlines
    i. Example: Project Leader, Activity Leaders, full time researchers, requiring extra time work to meet the deadlines

   ii. Time-sheet: Short statement of work each time a work is performed in OWH and time taken to perform the work (rounded to hours, ½ an hour, or ¼ of an hour as applicable) for a predefined OWH salary payment period
   iii. Pay-sheet: For the predefined OWH salary payment period
5. Contribution to Project (C2P) Part-time hourly employment (NWH/OWH), most general type
   i. Example: Organizational contribution of personnel work hours (NWH), personal contributions (NWH or OWH)
   ii. Time-sheet: Short statement of work each time a work is performed and time taken to perform the work (rounded to hours, ½ an hour, or ¼ of an hour as applicable) for a predefined contribution statement period
   iii. Contribution statement: For the predefined contribution period

In addition to the employment contract, the following documents may be required for transparent employments.

1. Assignment to work in the Project by the Primary Employer in NWH that defines basically (required for Project Administrator, Project Leader, Activity Leaders, and other staffs of the participating organizations)
   - Number of hours that the organization is going to invoice to project
   - Number of hours that the organization intends to contribute
   - Number of hours that the employee may invoice to project
2. Assignment to work overtime in the Project by the Project Employer that defines
   - Reason for overtime work assignment
   - Period of assignment
   - Total number of hours of assignment
3. Permission to work in the Project for student by Academic Advisor and Academic Administrator that defines
   - Reason for the permission
   - Total number of hours per month/period permitted
4. Declaration of availability to work in the Project by personnel with other employments (in special cases)

The Programme has developed various formats and samples for the above mentioned documents. These are provided to all projects for reference. Some of these document formats or samples are presented here. The documents may be modified to suit specific conditions. For details, the Programme Office may be contacted. In addition, the Programme has also prepared a short reference for general employment terms and conditions, which is presented in the next sub-section.

Long Term Full-Time Monthly Employment in the Project

Project ID: RENP-10-06-PID-327

Contract No: PID-327-01/10

EMPOLYMENT CONTRACT

Date: 01 Aug. 2010

Ref.: 10-08-10-LTFTM-Employment

You are hereby employed in the following Project in the NORMAL mode of employment specified below for the indicated period.

Employee Details:

1. Name of the Employee: Mohan Wagle
2. Date of Birth (DD-MM-YYYY): 10-12-1984
3. Permanent Address: Sundar Galli, Lalitpur-7, Nepal
4. Phone No. including mobile no.: Res: 5560234 Mobile: 9841234567
5. Email Address: mwagle@gmail.com
6. Highest Academic Qualification of the Employee: Bachelor of Engineering in Electrical
7. Relevant work experience year, as recognized by the Employer: 0 years of relevant full-time work equivalent

Employment Mode:

1. Position in the Project: Research Assistant
2. Primary Place of Work: Dept. of EEE, KU, Dhulikhel
3. Employment Period: 01 August 2010- 31 July 2011 (one year)
4. Work Supervisor: Diwakar Bista, Project Leader
5. Time Basis of Employment: Monthly with following details
    a. Normal Work Hour Time of Day of Work: 09:00-16:00
    b. Normal Working Days of the Month: Sun-Fri, except for administrative holidays at KU on those days
    c. Allowed Paid Leave in the Period: 12 days
    d. Maximum Paid Leave per Month: 2 days
    e. Overtime Works: As assigned by the employer and accepted by the employee separately
6. Time Cost of Employment and Invoicing:
    a. Invoice to Project NWH Monthly Gross Salary Rate: 20,000NRs.
    b. Invoice Type: Daily Time Sheet of Work for all workdays submitted on monthly basis
    c. Salary deduction per day for additional leave than allowed paid leave in a month: 800NRs.
7. Equivalent Position and Facilities in the Employer Organization or Primary Place of Work: (if available)
    a. Equivalent Position: Teaching Assistant
    b. Approximate Gross Salary Per Month (SPM) of the Position: 18,000NRs
8. Job Description: Attached
9. Terms of Reference for the Employment: Attached.
10. Additional benefits: NONE or Yearly Allowance or Insurance Allowance or Commutation Allowance

Note: The employee is assumed not employed in any other places on a regular basis and is not eligible to work in any other places on a regular basis requiring an involvement of 2 hours per day on the working days above, 30 hours per month maximum.

Signature and Declarations

Employer:

_____

Name of the Authority
Position of the Authority
Contact Phone and E-Mail

Supervisor if different from employer

_____

Name of the Authority
Position of the Authority
Contact Phone and E-Mail

Employee's Declaration:

I am eligible and comfortably available for the employment, and hereby agree to work for the project according to the details mentioned above.

_____

Name of the Employee and Date

TIME-SHEET of WORK of RENEWABLENEPAL funded PROJECT STAFF

Employer Organization: Kathmandu University, Dept. of EEE

Project ID: RENP-10-06-PID-327

Employment Type: **Full-Time Regular Monthly Basis; Normal Working Hours Invoice to Project [NWH-I2P]**

Staff Name : Mohan Wagle
Position : Research Assistant
Primary Place of Work : Kathmandu University, Dept. of EEE, Dhulikhel, Nepal
Work Unit : No. of days worked against no. of days supposed to work
Required Work Units : All working days of a month period excluding weekly, public, and other holidays of KU in that period
Time Sheet Period : 01-31 August 2010 (One Month)
Summary of Work in the Period:

Date & Day		*Location*	*Major Activity of the Day*	Remarks
1	S	Dhulikhel	*Literature study*	
2	M	Dhulikhel	*Experimentation on control circuit*	
3	T	Kathmandu	*Visit to partner and discussion on project*	
4	W			
5	T			
6	F			
7	S		*HOLIDAY*	Weekly Holiday
8	S			
9	M			
10	T			
11	W			
12	T			
13	F			
14	S		*HOLIDAY*	Weekly Holiday
15	S			
16	M			
17	T		*LEAVE*	Casual Leave
18	W			
19	T			
20	F			
21	S		*HOLIDAY*	Weekly Holiday
22	S			
23	M			
24	T		*HOLIDAY*	Janai Purnima
25	W		*HOLIDAY*	Gai Jatra
26	T			
27	F			
28	S		*HOLIDAY*	Weekly Holiday
29	S			
30	M			
31	T			

Summary:
Total no. of days in the month including holidays: 31 days
Total no. of holidays in the month: 6 days (weekly and public holidays)
Total no. of days supposed to work: 25 days
Total no. of days worked: 24
Total no. of days on leave: 1

Signature of Staff with Date: **Signature of Employer with Date**

PAY-SHEET of WORK of RENEWABLENEPAL funded PROJECT STAFF

Employer Organization: Kathmandu University, Dept. of EEE
Project ID: RENP-10-06-PID-327
Project Account Name: RENP-10-06-PID-327-Solar and WLED
Employment Type: **Full-Time Regular Monthly Basis; Normal Working Hours Invoice to Project [NWH-I2P]**

Date: 02 September 201
Ref.: 10-08-Salary-MW

Staff Name : Mohan Wagle
Position : Research Assistant
Pay Sheet Period : 01-31 August 2010 (One Month)

Employment Summary Relevant to This Salary Payment:

Contract period : 01 Aug 2010 – 31 Dec 2010
Time basis of employment : Full-time at normal working hours and monthly salary basis
Salary per month (SPM) : NRs. 20,000 (Twenty Thousand Only)
Paid leave allowed in the period: 6 days
Maximum allowed paid leave per month: 2 days
Salary calculation against : Time sheet of work
Salary per day (SPD) reduction for extra leave: NRs. 800(eight hundred only)

Summary from Time-Sheet of Work:

1. Total no. of days in the month including holidays: 31 days
2. Total no. of holidays in the month: 6 days (weekly and public holidays)
3. Total no. of days supposed to work: 25 days
4. Total no. of days worked: 24 days
5. Total no. of days on leave: 1 day
6. Pay deductible leave in the month: 0 day
7. Remaining allowed paid leave before this month: 6 days
8. Remaining allowed paid leave after this month: 5 days

Salary Calculation:

Salary per month (A)	Reduction if any			Salary of the month (A-B)	Remarks
	Rate	Unit	Amount (B)		
20,000	800	0	0	**20,000**	Salary for research assistar

Eligible salary for this month in words: NRs. Twenty thousand only

Pay Sheet Prepared By and Signature:

[Sign Here]
Mohan Wagle, Research Assistant

Payment Authorization and Instruction:

Budget Heading: B. Active Researcher
Expenditure Description: Salary to Research Assistant Mohan Wagle for the Month August 2010
Amount: NRs. Twenty thousand only
Any Specific Instruction:

Authorized by:

_____
Diwakar Bista
Project Leader
Asst. Prof., Dept of EEE, Kathmandu University

Long Term Part-Time Hourly Employment in the Project

Project ID: RENP-10-06-PID-327

Contract No: PID-327-01/10

EMPOLYMENT AWARD/CONTRACT

Date: 01 Aug. 2010

Ref..: 10-08-10-LTPTH-Employment

You are hereby employed in the following Project in the NORMAL mode of employment specified below for the indicated period.

Employee Details:

1. Name of the Employee: Mohan Wagle
2. Date of Birth (DD-MM-YYYY): 10-12-1984
3. Permanent Address: Sundar Galli, Lalitpur-7, Nepal
4. Phone No. including mobile no.: Res: 5560234 Mobile: 9841234567
5. Email Address: mwagle@gmail.com
6. Highest Academic Qualification of the Employee: Bachelor of Engineering in Electrical
7. Relevant work experience year, as recognized by the Employer: 0 years of relevant full-time work equivalent

Employment Mode:

1. Position in the Project: Research Assistant
2. Primary Place of Work: Dept. of EEE, KU, Dhulikhel
3. Employment Period: 01 August 2010- 31 July 2011 (one year)
4. Work Supervisor: Diwakar Bista, Project Leader
5. Time Basis of Employment: Hourly with following details
    a. Total Employment Normal Work Hours (NWH) in the Period: 500Hrs
    b. Distribution of Employment Normal Work Hours: 50 Hrs/month maximum flexible
    c. NWH Time of Day of Work: Flexible hours independent of the time of day and type of day?? Normal working hour of KU??
    d. Overtime Works: As assigned by the employer and accepted by the employee separately
6. Time Cost of Employment and Invoicing:
    a. Invoice to Project NWH Hourly Gross Salary Rate: NRs. 120/Hr
    b. Invoice Type: Hourly Time Sheet of Work submitted on monthly basis
    c. Equivalent Position and Gross Salary in the Employer or Primary Place of Work:
    d. Equivalent Position: Teaching Assistant
    e. Approximate Gross Salary Per Month (SPM) of the Position: 18,000NRs
    f. Salary Per Hour for the Equivalent Position (SPM divided 150): 120NRs
7. Job Description: Attached
8. Terms of Reference for the Employment: Attached.
9. Description of regular involvement/employment of the employee in the period, other than in the project: Attached
10. Permission to work in the project from primary employment or involvement organization: Attached
11. Additional benefits: NONE or Dashain Allowance or Insurance Allowance or Commutation Allowance

Note: Any large deviation from this normal mode will be justified by the employee and the employer will have right to accept or reject claim of work hours exceeding the normal hours mentioned.

Signature and Declarations

Employer:

_____

Name of the Authority

Position of the Authority

Contact Phone and E-Mail

Supervisor if different from employer

_____

Name of the Authority

Position of the Authority

Contact Phone and E-Mail

Employee's Declaration:

I am eligible and comfortably available for the employment, and hereby agree to work for the project according to the details mentioned above.

_____

Name of the Employee and Date

TIME-SHEET of WORK of RENEWABLENEPAL funded PROJECT STAFF

Employer Organization: Kathmandu University, Dept. of EEE

Project ID: RENP-10-06-PID-327

Employment Type: **Part-Time Hourly Basis; Normal Working Hours Invoice to Project [NWH-I2P]**

Staff Name : Mohan Wagle
Position : Activity Leader
Primary Place of Work : Kathmandu University, Dept. of EEE, Dhulikhel, Nepal
Work Unit : No. of hours worked
Typical/Required/Maximum Work Units : Hours as mentioned in the employment contract
Time Sheet Period : 01 August -31 October 2010 (Three months)
Summary of Work in the Period:

Date &Day		*Time of Day*	*No. of Units*	*Location*	*Major Activity of the Day*	Remarks
01/08	Sun	09:00-11:00	2	Dhulikhel	Experimentation on lighting system	
02/08	Mon	12:00-14:00	2	Dhulikhel	Experimentation on lighting system	
03/08	Tue	15:00-16:00	1	Dhulikhel	Experimentation on lighting system	
04/08	Wed	11:00-13:00	2	Dhulikhel	Experimentation on lighting system	
10/08	Tue	09:00-11:00	2	Dhulikhel	Experimentation on lighting system	
27/09	Mon	12:00-14:00	2	Dhulikhel	Experimentation on lighting system	
28/09	Tue	15:00-16:00	1	Dhulikhel	Experimentation on lighting system	
29/09	Wed	11:00-13:00	2	Dhulikhel	Experimentation on lighting system	
30/09	Thu	09:00-11:00	2	Dhulikhel	Experimentation on lighting system	
01/10	Fri	12:00-14:00	2	Dhulikhel	Experimentation on lighting system	
03/10	Sun	15:00-16:00	1	Dhulikhel	Experimental data analysis	
28/10	Thu	11:00-13:00	2	Dhulikhel	Experimental data analysis	
29/10	Fri	09:00-10:00	1	Dhulikhel	Experimental data result reporting	Report

Summary:
Total no. of hours worked in the period: 22 Hours

Signature of Staff with Date: **Signature of Employer with Date**

PAY-SHEET of WORK of RENEWABLENEPAL funded PROJECT STAFF

Employer Organization: Kathmandu University, Dept. of EEE
Project ID: RENP-10-06-PID-327
Project Account Name: RENP-10-06-PID-327-Solar and WLED
Employment Type: **Part-Time Hourly Basis; Normal Working Hours Invoice to Project [NWH-I2P]**

Date: 02 Nov. 2010
Ref.: 10-08-10-Salary-MW

Staff Name : Mohan Wagle
Position : Activity Leader
Pay Sheet Period : 01 August-31 October 2010 (Three Month)
Salary Type : Hourly, Normal Working Hours Worked, Invoice to Project [NWH-I2P]

Employment Summary Relevant to This Salary Payment:

Contract period : 01 Aug 2010 – 31 Oct 2010
Time basis of employment : Part-time at normal working hours and hourly salary basis
Salary calculation against : Hourly Time sheet of work
Salary per hour (SPH) : NRs. 200(two hundred only)

Summary from Time-Sheet of Work:

1. Total no. of hours worked: 22 Hours

Salary Calculation:

Salary per Hour (A)	Hours Worked (B)	Total Salay (AxB)	Remarks
200	22	**4,400**	Part time activity leader

Eligible salary for this period in words: NRs. Four thousand four hundred only

Pay Sheet Prepared By and Signature:

[Sign Here]
Mohan Wagle, Activity Leader

Payment Authorization and Instruction:

Budget Heading: A. Expert services
Expenditure Description: Salary to Activity Leader Mohan Wagle for the work Aug-Oct 2010
Amount: NRs. Four thousand four hundred only
Any Specific Instruction:

Authorized by:

_____
Diwakar Bista
Project Leader
Asst. Prof., Dept of EEE, Kathmandu University

STATEMNET of CONTRIBUTION of RENEWABLENEPAL funded PROJECT STAFF

Employer Organization: Kathmandu University, Dept. of EEE

Project ID: RENP-10-06-PID-327

Employment Type: **Part-Time Hourly Basis; Normal Working Hours Contribution to Project [NWH-C2P]**

Date: 02 Nov. 2010
Ref.: 10-08-10-C2P-MW

Staff Name : Mohan Wagle
Position : Activity Leader
Pay Sheet Period : 01 August-31 October 2010 (Three Month)
Salary Type : Hourly, Normal Working Hours Worked, Contribution to Project [NWH-I2P]

Employment Summary Relevant to This Contribution Statement:

Contract period : 01 Aug 2010 – 31 Oct 2010
Time basis of employment : Part-time at normal working hours and hourly contribution basis
Contribution calculation against: Hourly Time sheet of work
Contribution rate per hour (CPH): NRs. 200(two hundred only)

Summary from Time-Sheet of Work:

1. Total no. of hours worked: 22 Hours

Contribution Calculation:

Contribution per Hour (A)	Hours Worked (B)	Total Contribution (AxB)	Remarks
200	22	**4,400**	Part time activity leader

Total contribution for this period in words: NRs. Four thousand four hundred only

Contribution Statement Prepared By and Signature:

[Sign Here]
Mohan Wagle, Activity Leader

Contribution Authorization and Instruction:

Budget Heading: A. Expert services
Contribution Description: Contribution of Activity Leader Mohan Wagle for the work Aug-Oct 2010
Amount: NRs. Four thousand four hundred only
Any Specific Instruction:

Authorized by:

_____
Diwakar Bista
Project Leader
Asst. Prof., Dept of EEE, Kathmandu University

Assignment to Work in Project From Primary Employer
Primary Employer Organization: **Kathmandu University**

Date: 01 Aug. 2010
Ref.: 10-08-10-Staff-Assignment

The following full time employee of Kathmandu University has been assigned to work in the following R&D project in the following NORMAL mode, in the Normal Working Hours of the University.

Employee and Primary Employment Details:

1. Name of the Employee: Mohan Wagle
2. Position of the Employee: Assistant Professor
3. Normal Working Hours and Days: 09:00-16:00, Sun-Fri
4. Approximate Gross Salary per Month of the Employee: NRs 30,000/Month
5. Approximate Gross Salary per Hour of the Employee: NRs.200/Hr

Project Details:

1. Project Name/ID: RENP-10-06-PID-327
2. Project Owner: Kathmandu University
3. Project Period: 01 August 2010-31 July 2012
4. Position of the Employee in the Project: Activity Leader

Assignment Mode:

1. Assignment Period: 01 August 2010- 31 July 2010 (One Year)
2. Time Basis of Assignment:
    a. Total Assignment Hours in the Period: 300Hrs
    b. Distribution of Assignment Hours: 30Hrs/month or Flexible
    c. Invoice to Project Hours: 150Hrs
    d. Contribution to Project Hours: 150Hrs
3. Time Cost of Assignment and Invoicing:
    a. Invoice to Project Hourly Rate: NRs. 200/Hr
    b. Invoice type (mention one) : From Kathmandu University/From Employee/Mixed
    c. Mixed Invoicing (mention the following):
        i. Hours to be Invoiced by Kathmandu University: 100Hrs
        ii. Hours to be Invoiced by the Employee (As Extra Allowance): 50Hrs

Note:

1. The amount invoiced by the employee will be the employee's personal income, considered as personal project allowance extra to the regular salary of the University.
2. The amount invoice by the Organization will go to organization as organizational income. The organization will not be obliged to pay additional salary or allowance to the Employee due to this income. The Employee only gets the regular salary of the University.
3. Any large deviation from this normal mode will be justified by the organization and the employee.
4. The Employee will not be obliged to work extra time for the Organization with a reason being assignment in the project.

Assigned by:

_____
Name of the Authority
Position of the Authority

Employee's Declaration:
I agree to work for the project in the mode mentioned above.

_____
Name of the Employee

Assignment to Work Overtime in Project From Project Employer
Project ID: RENP-10-06-PID-327

Date: 01 Aug. 2010
Ref./Assignment-No.: 10-08-10-OW-Assignment

You are hereby requested to carry out Overtime Work for the project in the excess of your monthly full time Normal Working Hours of work (in project or elsewhere) due to the reason and NORMAL mode of work specified below.

Employee and Primary Employment Details:

1. Name of the Employee: Mohan Wagle
2. Position of the Employee: Research Assistant
3. Normal Working Hours and Days: 09:00-16:00, Sun-Fri
4. Total Normal Working Hours/Month Considered: 150
5. Regular Normal Working Hour Involvement:
    a. 75 hours in the Project (under separate employment contract)
    b. 75 hours as Part-Time teacher in DoEEE, KU
6. Gross Salary per Hour of the Employee in the Project: NRs.200/Hr

Assignment Mode:

1. Assignment Period: 01 August 2010- 31 October 2010 (Three Months)
2. Time Basis of Overtime Work Hour (OWH) Assignment:
    a. Total OWH Assignment in the Period: 90Hrs
    b. OWH limit per month: 30Hrs
    c. OWH Limit per week: 10Hrs
    d. OWH limit per day: 2 hrs on working day and 6 hours on holiday
3. Time Cost of Assignment and Invoicing:
    a. Invoice to Project OWH Hourly Rate: NRs. 300/Hr
    b. Invoice type: Personal Invoice to Project in form of OWH time sheet of work

Reason for OW Assignment: to meet the deadline of annual reporting for the project, because of no NWH assignment from the Primary Employer, because NWH assignment from Primary Employer is insufficient to meet the project work demand, etc.

Note:

1. Any large deviation from this normal mode will be justified by the organization and the employee.

Assigned by:

_____
Name of the Authority
Position of the Authority

Employee's Declaration:
I agree to work for the project in the OWH mode mentioned above.

_____
Name of the Employee

Permission to Student to Work in R&D Project

Date: 01 Aug. 2010
Ref.: 10-08-10-SWF

To whom it may concern:

This is to inform that the following student of the following academic program at the following current status has been permitted to work in R&D project for the indicated period in the following mode.

Student Details:

1. Name of the Student: Mohan Wagle
2. Enrolled Program: PhD
3. Institution: Kathmandu University
4. Current Year/Status: 2nd Year
5. Current Major Academic Activity: Full-Time Research
6. Main Academic Supervisor: Prof. Rabindra Sharma
7. Main Academic Administrator: Prof. Ram Kumar Shrestha, Dean, School of Engineering
8. Involvement Period: 01 August 2010- 31 July 2013 (three year)
9. Time Basis of Involvement: Full-Time Student

R&D Employment Permission Details:

1. Employment Institution: Dept. of Mech. Eng., Kathmandu University
2. R&D Project Name: Bio-gas gasifier
3. Current Employment Period: 01 August 2010- 31 July 2011 (One year)
4. Time Limits for the Project Employment:
    a. Daily limit: up to 7Hrs
    b. Weekly limit: 20 Hrs
    c. Monthly limit: 80 Hrs
5. Other Limitations:
    a. The student shall be free on Sundays and Fridays to report to or discuss with the supervisor whenever the supervisor instructs to do so.
    b. The student shall assist the supervisor as Teaching Assistant on Monday morning (09:00-12:00) and Wednesday afternoon (13:00-16:00).

Reason for Permitting Employment in the Project:

The thesis work is related to the project and result of the project work will be a part of the thesis; the student needs to support his/her living; etc.

Permitted by:

_____
Name of the Academic Supervisor
Position

_____
Name of the Academic Administrator
Position

5.3.6 General Terms of Reference for Project Employment

1. Job Description

The basic job description of employee will be according to the attachment to the employment contract or as mentioned in the employment contract, signed by both the employee and the employer. In addition, the employee will be obliged to carry out additional responsibilities assigned by the supervisor, with a verbal or a written agreement between the supervisor/employer and the employee.

2. Place of Work and Working Time:

The employee shall make avail the services at the primary place of work defined in the contract, unless assigned by the supervisor to work at other places or to go on a mission. The normal working time will be in accordance to the working time of day mentioned in the contract. Overtime work conditions will be according to the overtime assignment by the employer or the supervisor and mentioned terms and conditions for the overtime assignment.

3. Salary, Benefits, Paid Leave, and Holidays:

The Employee will be provided salary and benefits as mentioned in the employment contract. Paid leave and holidays provisions are also mentioned in the employment contract itself. Any additional benefits will be in accordance to the employment contract.

4. Visit/Travel on Mission:

i. A visit/travel order will be issued by the Employer mentioning mission destination, purpose of mission, duration of mission, mechanism of covering the mission costs.

ii. The travel, accommodation, and other mission related costs should be as economical as possible.

iii. Major transportation costs (air, bus, train, etc.) will be provided based on evidences of travel and cost of travel.

iv. Local transportation, communication, and other miscellaneous costs during the visit/travel may be provided based on evidences/claims.

v. Each day of work or travel during the mission will be considered as a normal day's work (or 7 hours of work). The rate for such will be normal rate mentioned in the Employment Contract, and will not consider the living cost at the mission location. No overtime will be provided for overtime works during the mission.

vi. A fixed amount of daily allowance may be provided to cover the cost of lodging and food according to the rate mentioned in the travel order OR the cost of lodging and food may be provided according to the bill/claim depending on the mechanism mentioned in the travel order.

vii. If part or whole of the mission related cost is sponsored or if free facilities are provided by hosts, then the facilities sponsored or freely obtained will be deducted from normally eligible claim. Such sponsorships or freely available facilities may be regarded as contribution from the organization to the project.

viii. A cost claim will be required after the mission is over with all the evidences. The traveller shall try to obtain, keep, and furnish payment records for all the payments made, to the utmost possible.

ix. The employer will have right to accept or reject claims without concrete evidences or claims made for costs on headings that are not mutually agreed prior to the mission.

x. An advance will be provided to cover the mission costs based on the estimated cost of mission. The advance shall generally be cleared within 7 days of arrival at the primary place of work after the mission is over.

xi. A short mission accomplishment report or visit report is required within 7 days of arrival at the primary place of work after the mission is over.

5. Occupational Health and Safety:

Precautions to be taken for occupational health and safety related matters are primarily the responsibility of the Employee. The Employee shall bring into notice the occupational health and workplace safety related matters to the Supervisor and the Employer. The Supervisor, the Employer and the Employee shall formulate appropriate safety procedures, precautions, and use of protective devices. The Employee shall follow these procedures, observe precautions, and use the protective devices.

6. Insurance:

Workplace accident, medical, health, mission related, etc. insurance will be the responsibility of the Employee primarily. The Employer may provide insurance subsidy on already agreed matters.

7. Data Security and Protection:

The employee shall observe appropriate procedure for data security and protection. The Employee shall regularly backup data and programs on separate physical drives. Passwords must be used appropriately to protect the data and programs from unauthorized access. Moreover, the Employer/Supervisor may demand access to the data and programs of the Employee related to the employment at any time. The employee shall generally destroy all the data and programs from personal possession after the handover of the same to the Supervisor/Employer.

The Employee shall not take away data related to the work using portable media, computer network, internet applications or any means, unless permitted by the Supervisor/Employer.

8. Confidentiality and Restriction on Public Expression:

The employee shall observe confidentiality on all R&D matters of the Project and the R&D process and results related to the employment. The R&D procedures, results, and other related matter shall never be disclosed to public or third party without consent of the Employer, at least for 2 years after the R&D project has terminated.

9. Good Moral Behaviour:

The employee shall always observe the generally regarded good moral behaviour, in relation to this employment.

10. Use of R&D Results in Future:

The Employee will be entitled with the use of knowledge developed by the Employee himself/herself during the employment without any restriction in future. Moreover, the employee shall not use any stored data, documented methods, documented designs, written programs, and other tools/methods, which are developed by the Employee during the employment, directly on future works, without permission of the Employer.

11. Communication and Reporting:

The employee shall communicate with the supervisor regularly using the media designated by the supervisor. The employee is required to meet in person with the supervisor at times and frequency decided by the Supervisor. The employee shall furnish reports as demanded by the Supervisor, at practical deadlines agreed beforehand.

12. Use of Software and Copy Righted Materials:

The employee shall bring into notice the matter related with this issue to the Supervisor and the Employer, if any action of the Employee may result in the violation of the rights of the third party.

13. Handover and Clearance upon Completion of the Employment:

The employee shall follow proper termination procedure for the termination of the employment at the end of the employment. The employee shall make a list of all durables (equipments, tools, furniture software, etc.) under his/her possession and handover to the employer. The employee shall handover all the remaining stock of consumables in his/her possession to the employer. The employee shall handover all the data, programs, and references (books, reports, references) to the employer in proper storage media. The employee shall take clearance from the various units of the employment organization or primary place of work that are related to the employment. The employee shall further declare that the confidentiality of R&D procedures followed in the Project will be maintained for at least the remaining project period.

14. Termination of the Employment Contract:

The employment contract may be terminated by either of the contracting parties with ONE MONTH prior notification for any reason what so ever. The employee shall carryout all the handover procedure required for proper termination of the employment.

15. Amendment to the Employment Related Documents:

Any matter that require changes in any article in the Employment Contract, Job Description, Employee Declaration, Primary Employer Assignment, Approval of Student to Work in Project, this Terms of Reference for Employment or any other document submitted in relation to this employment shall be immediately brought into notice of the Employer and the Employee/Supervisor amongst each other, and subsequent amendment to the Employment Related Documents shall be done. The Employer and the Employee related status changes shall be transparent. The Employer will not be obliged to bear additional financial costs due to status upgrade of the Employee in the interim of the contract period. Salary rates are usually fixed for entire employment period.

16. Dispute Settlement:

Any dispute related to this employment shall be resolved amicably between the Employee, the Supervisor, and the Employer. The Employee and the Employer/Supervisor cannot invoke any conditions not mentioned in this employment related formal documents.

17. Right to Explain and Interpret:

The Employer will be the primary authority to explain and interpret all the Employment related documents including this ToR.

Declarations:

We have read through the ToR and hereby agree on this ToR.

_____

Employee

_____ _____

Employer Supervisor

5.3. 7. Managing Other Contributions

Projects normally plan for other contributions to make the project more productive. The contribution source can be the participants or external source. Any contribution in cash can be easily accounted as it should result in the transfer of cash contribution to the Project Account. The contribution is kind is difficult to account. Any contribution in kind resulting from personnel hour of work in the project may be accounted referring to Section 5.3.5. Note that the contribution may be organizational or personal. Organizational contribution management is normally a challenge for the organization, as it is a kind of contribution that the organization makes to the project while the salary of the personnel is paid from other sources of income of the organization. Therefore, the organization may be required to consider the synergy effect that the Project produces to justify such contribution. Similar consideration shall be made for the use of facilities and other resources of organization in the contribution mode. The contribution rate shall be justifiable. Use of existing equipments and test/manufacturing facilities may account depreciation and operational costs of equipments. A rate per hour may be defined for such situation and accordingly project may be charged or contributed. Space use may consider maintenance costs. Electricity use may be accounted on approximate basis or on actual basis. It is imperative that the organization with many R&D projects shall have a define policy on invoicing or making contribution. Further, the organization should have some kind of rate defined for use of facilities and resources. It is important that Project Budget has identified the rate realistically and obtained approval from the respective organizations.

The R&D project definitely attracts funding from other sources as it progresses and as it is executed efficiently to show its effectiveness. Further, R&D projects may interact to reduce cost and at the same time increase the effectiveness. Therefore, a steadily progressing R&D project has the opportunity to get contributions from various sources as the project moves on. These opportunities shall be utilized proactively by the projects.

5.3. 8.Managing Accounting and Book Keeping

The Projects shall follow standard accounting and book keeping procedures. Projects shall keep all the accounting records and arrange them in a way that suits the requirements of the annual or final financial statement. In general, the financial statement shall furnish details of all major expenditures. These include the HR cost, equipment, tools, durables, major travels, and others if the cost of transaction is significant. Minor expenditures may be grouped in the statement. Moreover, it should be realized that the total minor cost in each budget heading shall not be more than a few percentage of the reported major cost in the heading.

Book keeping shall be in order to locate the durables, condition of the durables, use of durables, expected useful life time, depreciation rate, net present value, etc. Respective organization's procedure may be followed.

The programme may provide limited support in assisting accounting and book-keeping.

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About KU, SINTEF, and NORAD

Kathmandu University (KU) is an autonomous, not-for-profit, non - government institution dedicated to maintain high standards of academic excellence. It is committed to develop leaders in professional areas through quality education. The vision of KU is “To become a world-class university devoted to bringing knowledge and technology to the service of mankind”. Its mission is “To provide quality education for leadership”

The SINTEF Group is the largest independent research organisation in Scandinavia. Every year, SINTEF supports the development of 2000 or so Norwegian and overseas companies via its research and development activity. Its vision is “Technology for a better society”. SINTEF's goal is to contribute to wealth creation and to the sound and sustainable development of society. SINTEF generate new knowledge and solutions for its customers, based on research and development in technology, the natural sciences, medicine and the social sciences.

SINTEF Energy Research is engaged in contract research in the national and international markets. R&D activities are focused on power production as well as energy conversion, transmission, distribution and the use of energy, including industrial processes and products.

The Norwegian Agency for Development Cooperation (Norad) is a directorate under the Norwegian Ministry of Foreign Affairs (MFA).

It aims to be the centre of expertise for evaluation, quality assurance and dissemination of the results of Norwegian development cooperation, jointly with partners in Norway, developing countries and the international community It will ensure that the goals of Norway's development policy are achieved by providing advice and support to the Ministry of Foreign Affairs and Norwegian foreign service missions. It will administer the agency's grant schemes so that development assistance provided through Norwegian and international partners contribute effectively to poverty reduction.

These goals will be achieved on the foundation of Norad's current competencies, through highly qualified staff, a flexible and practical organisation, good administrative support functions and a working environment characterised by transparency, respect, equality, responsibility and quality.

RenewableNepal Programme Handbook

First Edition

October 2010

RenewableNepal

A Programme for Research Based Industrial Development in Nepal

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