



Framework & Performance of National Clean Energy Fund (NCEF)



From its inception in July 2010, the National Clean Energy Fund (NCEF) has collected revenues to the tune of Rs 1,066 crore in FY 2010-11, an estimated Rs 3,249 crore in FY 2011-12, and is expected to generate a further Rs 3,864 crore in FY 2012-13.¹ However, little is known of its operational mechanics and performance to date. This brief attempts to demystify the process by evaluating the functioning of the NCEF under its present framework.

NCEF Framework

Origin: Announced in the Union Budget 2010-11, the NCEF is a non-lapsable corpus under the Public Accounts of India formed through the levy of a Clean Energy Cess of Rs. 50 per tonne on coal produced domestically and imported to India. The cess came into effect from July 2010. It is collected by the Central Board of Excise & Customs (CBEC), while Plan Finance II (PF-II) Division of the Department of Expenditure, Ministry of Finance (MoF) acts as the Secretariat for the NCEF and is the agency responsible for disbursing NCEF funds.

Purpose of NCEF: As per the NCEF guidelines released by the Ministry of Finance, the Fund was created for “funding research and innovative projects in clean energy technologies.”²

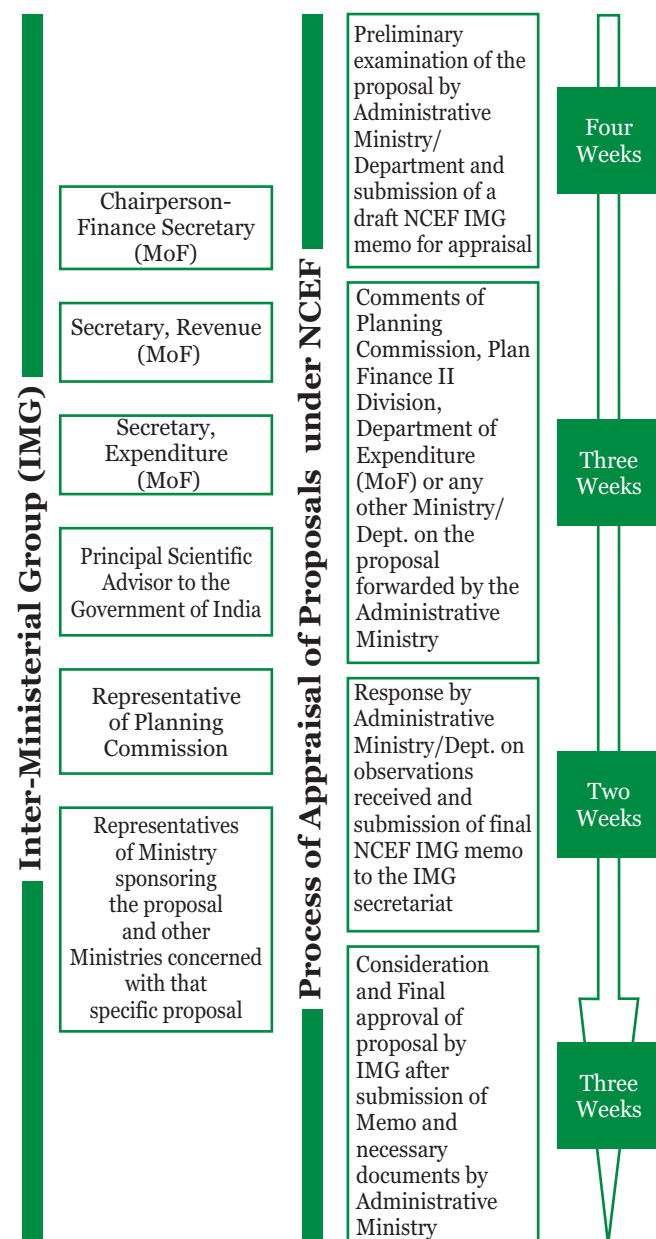
Applicant profile: The Fund is open to all. Project proposals can be submitted by individual/consortium of organizations in the Government/public sector/private sector. However, all projects must be sponsored by a Ministry/Department of the Government.

Funding requirements and limits: Projects are eligible to receive support in the form of loan or viability gap funding. However, NCEF assistance shall in no case exceed 40% of the total project cost. Participating organisations must put a minimum financial commitment of at least 40% of the project cost. Projects funded by any other arm of the Government of India or those that have received grants from any other national/international body are ineligible for funding under the NCEF.

Proposal appraisal process: Acceptance and review of proposals is an on-going process. Proposals are received by the line ministry that will be responsible for administering the project. As depicted in Figure 1, proposals pass a three-tiered evaluation process. They are initially appraised by the line/sponsor ministry; at the next step by the Ministry of Finance, Planning Commission, other relevant ministries and departments; and finally by the Inter-Ministerial Group (IMG) consisting of high-ranking officials from Ministry of Finance, Principal Scientific Advisor to the Government of India, Planning Commission, ministry sponsoring the proposal, and other ministries concerned with the proposal. As per the application form for proposals, it takes roughly three months from the time a proposal is received by a line ministry to it being presented before the IMG for consideration and final approval.³

The guidelines permit the IMG to seek the assistance and views of technical experts from related organisations and individuals of repute in the area of clean energy to review, evaluate and recommend projects for funding under the NCEF. The IMG has also been assigned the mandate to identify/appoint appropriate professional agencies for monitoring NCEF funded projects.

Figure 1: Operational Mechanics of NCEF



Disbursal of funds: Although IMG approval is necessary to obtain the NCEF funding, the IMG is not the final approving entity. As Table 1 indicates, this authority rests with three different approval forums, depending on the proposed budget of the project.

¹ Receipt Budget 2012-13, Ministry of Finance, Government of India. Available at <http://indiabudget.nic.in/ub2012-13/rec/tr.pdf>.

² NCEF guidelines are available at http://finmin.nic.in/the_ministry/dept_expenditure/plan_finance2/Guidelines_proj_NCEF.pdf.

³ Application form for proposals is available at http://www.finmin.nic.in/the_ministry/dept_expenditure/plan_finance2/Format_Forwarding_NCEF_IMGc.pdf.

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Table 1: Final Approval Forum for NCEF Projects

Approval Limit	Approval Forum
< Rs. 150 crore	The Minister-in-charge of Sponsor Ministry/Department
≥ Rs. 150 crore and < Rs. 300 crore	The Minister-in-charge of Sponsor Ministry/Department and Minister of Finance
≥ Rs. 300 crore	Cabinet Committee on Economic Affairs

NCEF Performance Evaluation

Since its inception in July 2010, precious little information on the operationalisation of the NCEF has been released in the public domain other than the guidelines and application form for proposals. Virtually nothing is known about the projects that have applied for the NCEF funding, the evaluation process they underwent, and disbursements made by the NCEF. To further public understanding on these matters and assess the state of operationalisation of the NCEF, Centre for Budget and Governance Accountability (CBGA) filed an RTI query with Ministry of Finance in January, 2012.

The documents reviewed by CBGA as part of its assessment include the NCEF guidelines for appraisal and approvals of projects/schemes eligible for financing under the NCEF, the application form for proposals, and meeting minutes detailing proceedings of the three IMG meetings held prior to February 24, 2012.⁴ While recognizing that basing the evaluation on just these documents has limitations, a fairly insightful assessment of the NCEF has been feasible.

CBGA concludes that operationalisation of the NCEF has been affected by several problems and resultantly the Fund's performance has been far from satisfactory. The proposals brought forth by sponsor ministries to date have generally lacked quality and innovativeness, and fail to progress the stated objective of the NCEF. Furthermore, the majority of the NCEF corpus remains unutilised.

A detailed evaluation highlighting areas of concern along with corrective measures proposed by CBGA follows.

A. Inconsistencies between NCEF's Stated Objective, Operational Guidelines and Actual Implementation by Sponsor Ministries and IMG

Guidelines allow funding of projects that do not credibly align with the objective of the NCEF:

Although the objective of the NCEF is to fund research and innovative projects in clean energy technologies, the guidelines permit projects having limited, if any, links to development of clean energy technologies. For instance, the eligibility criteria allow "projects related to environmental management particularly in the geographical areas surrounding the energy sector projects." CBGA found that this tenuous link has been further weakened in the way the guidelines have been implemented. This is evidenced by the IMG's approval for a Ministry of Environment and Forests (MoEF) project seeking funds for remediation of selected hazardous waste contaminated dump sites. By permitting projects of such varying scope the guidelines compromise the ability of the NCEF to achieve its stated objective. Additionally, in the long term, such inconsistencies will make the tasks of prioritizing NCEF funding among vastly different opportunities and assessing overall performance of the NCEF extremely difficult.

Recommendation: Revise eligibility criteria in guidelines to only permit projects involving research, development or adoption of clean energy technologies.

40% funding threshold and requirement that projects cannot be funded by other arms of the Government of India/receive grants from other national/ international bodies may lead to exclusion of projects worthy of receiving NCEF support:

The rationale for restricting Government assistance to a maximum of 40% is unclear. This threshold appears arbitrary. Innovative approaches to promote research, development or adoption of clean energy technologies may justifiably require a higher level of support from the Government given the greater technological risk and uncertain/limited revenue streams associated with such projects. For the same reasons, permitting co-funding of projects by other arms of the Government of India and/or other national/international bodies will provide greater flexibility in raising resources to support worthy projects.

Recommendation: Reconsider 40% funding limit and restriction on co-funding of projects by other arms of the Government of India or other national/international bodies. A properly implemented viability gap assessment is likely to be more suitable for determining the NCEF funding threshold. Additionally, guidelines should clearly articulate the eligible sources for raising balance project funds and the extent to which these funds should be identified and assured prior to seeking funds from the NCEF.

Requirement that support is in the form of loan or viability gap funding has not been adhered to in spirit:

A robust viability gap analysis is essential for determining the nature and level of NCEF support that a project should receive. However, the absence of any discussion in the IMG meeting minutes on the projected revenue stream expected from proposed projects, a critical component in assessing the viability of a project, suggests that sponsor ministries and IMG paid little attention to this aspect of the guidelines while deciding on the level of funding to seek/approve. Discounting this requirement will also have serious implications on the long term viability of projects funded by the NCEF.

Recommendation: Strengthen relevant section in application form to require project proposers to provide a detailed viability gap analysis in support of their project. Additionally, greater diligence on the part of sponsor ministries and IMG is required in enforcing this requirement of the guidelines.

Use of NCEF to meet shortfalls in General Budget allocation of sponsor ministries:

The IMG approved several projects that fall under regular schemes of the Ministry of New and Renewable Energy (MNRE), such as the installation of Solar Thermal Systems in 16 states and installation of SPV systems in Chhattisgarh, J&K, Rajasthan, Sikkim, UP and West Bengal. Support for these projects could have been met from the Union Budget, rather than the NCEF. Such use of the NCEF for meeting budgetary shortfalls of ministries is a concern that has been discussed within the IMG, but it is unclear if the difference of opinion existing within the IMG has been resolved. For instance, meeting minutes reveal that during the first IMG meeting Secretary MNRE conveyed that as per the understanding given to him by higher authorities, shortfall in budgetary allocation for *National Solar Mission* was to be funded through NCEF, and as such, no further approvals were required. In response, the Finance Secretary clarified that the specific purpose for which the NCEF was conceived

⁴ Minutes of IMG meetings held on June 14, 2011, August 11, 2011 and November 25, 2011 obtained by CBGA on February 24, 2012 from Plan Finance II Division, Department of Expenditure (Ministry of Finance) through Right to Information Act 2005. RTI response document is available at http://www.cbgaindia.org/files/policy_briefs/RTI%20Response%20Document%20on%20National%20Clean%20Energy%20Fund.pdf.

is to support research and innovative projects in clean energy technologies and that the NCEF could not be treated as an adjunct to the General Budget, wherefrom shortfalls in meeting budgetary requirements of already approved Plan Schemes can be met. The IMG's subsequent approval of Rs. 200 crore for preparatory activities by MoEF under the *Green India Mission* suggests that the NCEF is being used to some extent to support regular schemes and activities of ministries.

Recommendation: Revise guidelines to eliminate ambiguity surrounding the use of NCEF to meet budgetary shortfalls of ministries. Funding to support ministry's regular activities should be met from the appropriate sources available with the existing financing structure of General Budget.

B. Shortcomings in Operationalisation of the NCEF under its Existing Guidelines

Inconsistencies in proposal appraisal process: In several instances the IMG approved funding that exceeds 40% of the total project cost. These include proposals for MNRE for installation of SPV systems in Chhattisgarh, J&K, Rajasthan, Sikkim, UP and West Bengal and for pilot projects of 5,500 community size portable and fixed biomass cook-stoves (see "Approved Amount" column in Table 2). Similarly, the requirement that projects could not be funded by other arms of the Government of India was not adhered to in the proposal sponsored by MNRE to install SPV power plants in 50 villages of Gumla Districts of Jharkhand, as the balance funding was to be provided by the State Government.⁵ In a proposal sponsored by MoEF for remediation of selected hazardous waste contaminated dump sites, the IMG effectively changed the scope of the proposal by approving specific activities within the overall proposal and agreeing to fund these completely. The IMG noted that the 40% ceiling would be applied to the overall project, for which the sponsor ministry would need to seek IMG approval again at a later date.

Recommendation: Stricter adherence to existing NCEF guidelines during the proposal appraisal process. Additionally, scope of proposals should not be redefined in ways that compromise adherence to guidelines and the proposal appraisal process.

Absence of an appropriate proposal evaluation framework: A project's ability to promote research, development or use of innovative methods to adopt clean energy technologies seem to have played little, if any, role in the deliberations of the IMG. The likely dearth of discussions by the IMG on these matters is conspicuous by their absence in the meeting minutes. Instead, the IMG discussions mostly focused on verifying that proposals complied with the various financing requirements set out in the guidelines. Resultantly, projects approved by the IMG provide little cause for optimism that they will catalyse development of clean energy technologies in the country.

Recommendation: Develop and adopt a proposal evaluation framework that gives adequate weight to a project's ability to promote development of clean energy technologies and use of innovative methods.

Underutilisation of NCEF: A conservative estimate by CBGA based on a review of IMG decisions is that at least 80% of the NCEF corpus currently remains unutilised.⁶ This

suggests that sponsor ministries lack the capacity to develop proposals of the quality and size required to tap the full potential of the Fund. Nearly half the proposals appraised by the IMG were rejected or not approved in their entirety as they were found ineligible under the existing guidelines. Furthermore, CBGA concludes that the approval ratio would have been even lower if the IMG had strictly adhered to the 40% funding limit and other requirements in the guidelines.

Recommendation: Enhance proposal generation capacity of sponsor ministries by institutionalising robust proposal development pipelines through increased in-house technical expertise of ministries, greater access to external technical resources, and development of collaborative proposals with Indian research institutes and Industry. Additionally, improve due diligence by sponsor ministries while developing and appraising proposals.

Excessive emphasis on small scale technology demonstration projects: CBGA found that proposals involving clean energy technologies mainly sought to establish small scale technology demonstration projects. The benefits these projects will deliver in catalysing development of clean energy technologies are likely to be small compared to those available from alternative avenues in which NCEF resources can be applied.⁷ Given their small scale and use of relatively mature technologies, demonstration projects will have minimal impact on increasing market demand or in bringing down the cost of such technologies. On the other hand, opportunities for the NCEF to achieve greater impact by supporting research in potentially breakthrough technologies and facilitating their commercialisation, leveraging additional resources from Indian research institutes and industry, and creating new institutions and mechanisms for deployment of clean energy technologies at scale, have to date largely been ignored.

Recommendation: To ensure prudent use of the NCEF, sponsor ministries need to develop and implement a long-term vision/strategy for achieving the Fund's stated objective. The best opportunities for the NCEF to catalyse development of clean energy technologies need to be identified, and they should guide the proposal development and appraisal process. These opportunities are likely to vary by technology based on attributes like stage of maturation, capital-intensity and reliability. Stronger representation by the Office of the Principal Scientific Advisor, which meeting minutes suggest did not attend any of the IMG meetings, and institutionalisation of a process for obtaining assistance of external technical experts to review, evaluate and recommend projects, will be extremely constructive.

Inadequate involvement of Indian research institutes and industry: Although permissible under the guidelines, involvement of Indian industry and research institutes to date in the proposal development process seems to have been negligible. This suggests limited awareness amongst Indian research institutes and industry on the NCEF funding opportunity. Given that sponsor ministries can play only a limited role in research and development of clean energy technologies, strong interest of Indian industry and affiliated institutes and good working partnerships with sponsor ministries is essential if NCEF is to realise its maximum potential. The recent awards

⁵ The proposal was eventually rejected by the IMG on the ground that funding sought from NCEF exceeded 40% of project costs.

⁶ Although information on disbursements by NCEF was sought as part of the RTI query, the response received indicated that this information has to be obtained individually from each sponsor ministry. Alternatively, CBGA's review of Expenditure Budget (Vol-II) indicates that the following allocations have been approved for disbursement from the NCEF: Rs. 160.80 cr. for FY 2011-12 and Rs. 35.88 cr. for FY 2012-13 under budgetary head 'Grid Interactive and Distributive Renewable Power', and Rs. 6.55 cr. for FY 2011-12 under budgetary head 'Research, Design and Development in Renewable Power' to MNRE, and Rs. 60 cr. under budgetary head 'Hazardous Substance Management' and Rs. 200 cr. under budgetary head 'Green India Mission' to MoEF during FY 2012-13. Expenditure Budget (Vol-II) is available at <http://indiabudget.nic.in/ub2012-13/eb/sbe30.pdf>.

⁷ Many of these demonstration projects are planned in backward areas and those affected by left-wing extremism. Provision of renewable energy solutions to such underserved communities is a progressive measure; however, as noted by the IMG several Government programs already exist to specifically support such programs in these areas.

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announced for the Indo-US Joint Clean Energy Research and Development Centre (JCERDC) is indicative of the role that Indian industry and research institutes can play in advancing clean energy technologies in this country.⁸

Recommendation: To attract interest and participation of Indian research institutes and industry in the NCEF sponsor ministries should designate a nodal official for NCEF projects; proactively invite proposals from Indian research institutes and industry; and at regular intervals release information on the funding opportunity, status of appraised proposals, funds disbursed and progress on projects underway.

Absence of project monitoring mechanism: The NCEF guidelines mandate that the IMG appoint professional agencies to monitor progress of NCEF funded projects. CBGA's review of IMG meeting minutes suggest that the IMG has not acted upon this requirement as yet.

Recommendation: The IMG should identify and appoint a qualified professional agency to monitor progress of NCEF projects. This task should be undertaken by an external agency to avoid conflict of interest and to instil transparency in the process. Additionally, a project monitoring and evaluation framework, which includes a set of clearly defined metrics to evaluate progress of projects, needs to be developed and adopted.

Table 2: Project Proposals Considered in the First Three IMG Meetings

Projects Considered by IMG	Meeting (Date)	Project Cost (Rs. Cr.)	NCEF Request (Rs. Cr.)	Status of IMG Approval	Approved Amount (Rs. Cr.) / [% Proj. Cost]	Sponsor Ministry
Small Grid connected solar power projects under the <i>National Solar Mission</i>	June 14, 2011	95	95	IMG requested proposal be resubmitted in approved format	-	MNRE
Off Grid Subsidy cum refinance scheme under the <i>National Solar Mission</i>	June 14, 2011	290	290	IMG requested proposal be resubmitted in approved format	-	MNRE
Installation of SPV power plants of capacity aggregating to 1.4MW, extension of localised grid, etc. in 50 villages of Gumla District, Jharkhand	June 14, 2011 and August 11, 2011	72.67	53.49	Withdrawn by MNRE in June, 2011. Resubmitted in August, 2011. In principle approval, but balance 60% funding to be identified before proposal will be considered by IMG	-	MNRE
Additional subsidy for solar lantern charging facility and for rice husk based gasifier system in LWE areas	June 14, 2011	13.30	13.30	'In principle' approval by the IMG	13.30 [100%]	MNRE
Installation of SPV lights and other small capacity PV Systems in rural, semi-urban and urban areas through NABARD (JNNSM)	August 11, 2011	117	Unclear	Approved, subject to revisions proposed by IMG in structure of proposal	Unclear	MNRE
Installation of Solar Thermal Systems in 16 States	August 11, 2011	178.03	64.14	Approved	64.14 [36%]	MNRE
Installation of SPV Systems in Chhattisgarh, J&K, Rajasthan, Sikkim, UP & West Bengal	August 11, 2011	204.92	85.88	Approved	85.88 [42%]	MNRE
Installation of 1200 Solar Lantern in 60 LWE affected districts in 8 States	August 11, 2011	16.20	16.20	Rejected, 40% NCEF funding threshold exceeded	-	MNRE
Pilot projects – 5500 community size portable and fixed biomass cook-stoves	August 11, 2011	6.55	6.55	Approved	6.55 [100%] ⁹	MNRE
Remediation of 12 selected hazardous waste contaminated dump sites	August 11, 2011	805	563.50	Subject to several conditions, approved funding of Rs 60 crore to prepare DPRs for 12 sites	60 [scope of proposal revised]	MoEF
Financing a study to assess Wind Energy Resource potential in seven states	November 25, 2011	20.48	20.48	Rejected, proposed that MNRE seek Gross Budgetary Support for financing	-	MNRE
To carry out preparatory activities in FY 2011-12 under <i>Green India Mission</i>	November 25, 2011	200	200	Approved. MoEF clarified during meeting that only Rs 60 cr. was required in current year	200 [100%]	MoEF
Installation of one solar heating system and 10 solar street lighting system at all the six advanced training institutes	November 25, 2011	16.68	16.68	Rejected, proposal can be covered under existing scheme under the <i>National Solar Mission</i>	-	MoLE

Note: JNNSM = Jawaharlal Nehru National Solar Mission; LWE = Left-wing infested area; MNRE = Ministry of New and Renewable Energy; MoEF = Ministry of Environment and Forest; MoLE = Ministry of Labour and Employment.

⁸ The JCERDC award announcement, including a listing of winning organisations, is available at www.indoustf.org/doc/JCERDC_Announcement.pdf.

⁹ This estimate excludes the cost of 500 cook-stoves in private dhabas and restaurants. This cost, to be borne by respective industries, was not reflected in the meeting minutes as a part of the overall project cost. Their inclusion would reduce level of NCEF support to below 100% of project cost, but it will still far exceed the 40% threshold.

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