

Scope of Work

(Terms of Reference for Outcome Review in the form of Third-Party Evaluation of PMDP-15 Transmission Projects being implemented by RECPDCL in Ladakh Region.)

1.1. Brief about Transmission projects under PMDP-15 in Ladakh

The implementation of the 220 KV transmission lines with Gas Insulated Substation (GIS) under PMDP-2015 establishes critical grid connectivity for the strategically important for Nubra & Zaskar valley, replacing unreliable diesel-based power systems with sustainable electricity supply capable of operating through extreme winter conditions reaching -40°C. This infrastructure development facilitates enhanced healthcare services through reliable medical equipment operation, improved educational facilities via digital connectivity, expanded tourism capabilities, agricultural cold storage facilities, and small-scale industrial growth opportunities for remote border communities. The project execution involves complex technical challenges including high-altitude terrain construction, security protocol compliance in sensitive border areas, weather-dependent implementation schedules, and comprehensive road infrastructure upgrades for heavy equipment transportation, establishing this initiative as a foundational component for integrated regional development and sustainable high-altitude electrification in the Union Territory of Ladakh.

1.2. Brief about RECPDCL as Project Implementation Agency in UT of Ladakh

REC Power Development and Consultancy Limited (RECPDCL) has been appointed as the Project implementing Agency (PIA) for the “Construction of 02 nos. 220 kV Transmission Lines (Phyang to Diskit) and (Drass to Padum) and 02 nos. 220/33 kV, 50 MVA GIS substations along with 220 kV bay extension in the UT of Ladakh” under the PMDP-15 Scheme. RECPDCL is responsible for project execution, monitoring, and coordination with all stakeholders to ensure timely completion. Notification of Awards (both Supply of Goods & Supply of Services) for turnkey works was issued to all EPC agencies on 18.06.2021, followed by the execution of Contract Agreements on 29.07.2021. The details of the awarded work are summarized below:

S. No.	Region	Project Details	Package Details	Award Cost (Incl. GST) (Cr.)
1	Nubra Valley	220kV Transmission Line-01 (Phyang to Diskit)	TL-01 (Phyang to North Pullu)	137.85
2			TL-02 (North Pullu to Diskit)	120.22
3		220kV GIS Substation including bay extension	SS-02 (Diskit & Phyang extn.)	86.95
4	Zaskar Valley	220kV Transmission Line-02 (Drass to Padum)	TL-03 (Drass to Kochik)	257.76
5			TL-04 (Kochik to Rangdum)	256.79
6			TL-05 (Rangdum to Padum)	213.62
7		220kV GIS Substation including bay extension	SS-01 (Padum & Drass extn.)	129.89
Total				1203.08

1.3. Benefits State Brief Scheme of PMDP-15

- Grid Connection - 220 kV transmission lines connect remote Ladakh areas to Northern Grid for stable electricity supply
- Reduced Diesel Dependency - Eliminates reliance on diesel generators, especially during harsh winters, saving fuel costs and reducing pollution
- Quality of Life - Enables better lighting, heating, and electrical appliance usage for residents
- Economic Growth - Boosts tourism industry, creates new business opportunities, reduces operational costs for enterprises
- Social Improvements - Better healthcare services, enhanced educational facilities, improved learning environments
- Employment Generation - Construction projects create direct and indirect jobs for skilled and unskilled workers
- Environmental Benefits - Reduces carbon emissions and air/noise pollution, supporting Ladakh's carbon-neutral goals
- Cost Efficiency - Replaces expensive diesel generators with more affordable grid electricity

1.4. Scheme Details:

Original Approved cost	Rs. 354.74 Cr.
Revised Approved cost	Rs. 1203.08 Cr.
Approved extension of time for physical work completion	Oct-2026

1.5. Physical Progress:

For Nubra Valley:

Transmission Line	Length (km)	No. of Towers	No. of Towers wherein Foundation Completed	No. of Towers wherein Erection Completed	Stringing Completed (Ckt. KM)
Line -1 Phyang-Diskit	78.86	265	234	95	17.7

Sub-station Details	Civil Works	Equipment Supply	Erection
220/33kV, 1x50MVA GIS Sub-station at Diskit	90%	77%	55%
220 kV Bay extension at Phyang	98%	99%	95%

For Zanskar Valley:

Transmission Line	Length (km)	No. of Towers	No. of Towers wherein Foundation Completed	No. of Towers wherein Erection Completed	Stringing Completed (Ckt. KM)
Line -2 Drass-Padum	189.8	675	600	371	34.66

Sub-station Details	Civil Works	Equipment Supply	Erection
220/33kV, 1x50MVA GIS Sub-station at Padum	88%	85%	37%
220 kV Bay extension at Drass	90%	90%	0%

1.6 BILL OF QUANTITY

S.No.	Description	Unit	Qty	Amount in INR (including tax, etc.)
1	Third Party evaluation of the PMDP transmission Projects in Ladakh Region as per attached Terms of References (ToR), Scope of Work, Technical Specifications etc.	LS	01	

1.7 PAYMENT SCHEDULE:

- 1) Submission of Inception Report: 10% of total quoted price shall be released on Submission of Inception report to the client along with the copy of the Invoice.
- 2) Data Collection, Completion of Site Visits and Survey: 30% of total quoted price shall be released on Completion of Site Visits and Survey along with the copy of the Invoice.
- 3) Submission of Draft Report and Presentation to Client: 30% of total quoted price shall be released on Submission of Draft report to the client along with the copy of the Invoice.
- 4) Submission of Final Report and acceptance by client: Final 30% of total quoted price shall be released on Submission of Final Report and acceptance by client along with the copy of the Invoice.

1.8 DURATION OF THE CONTRACT:

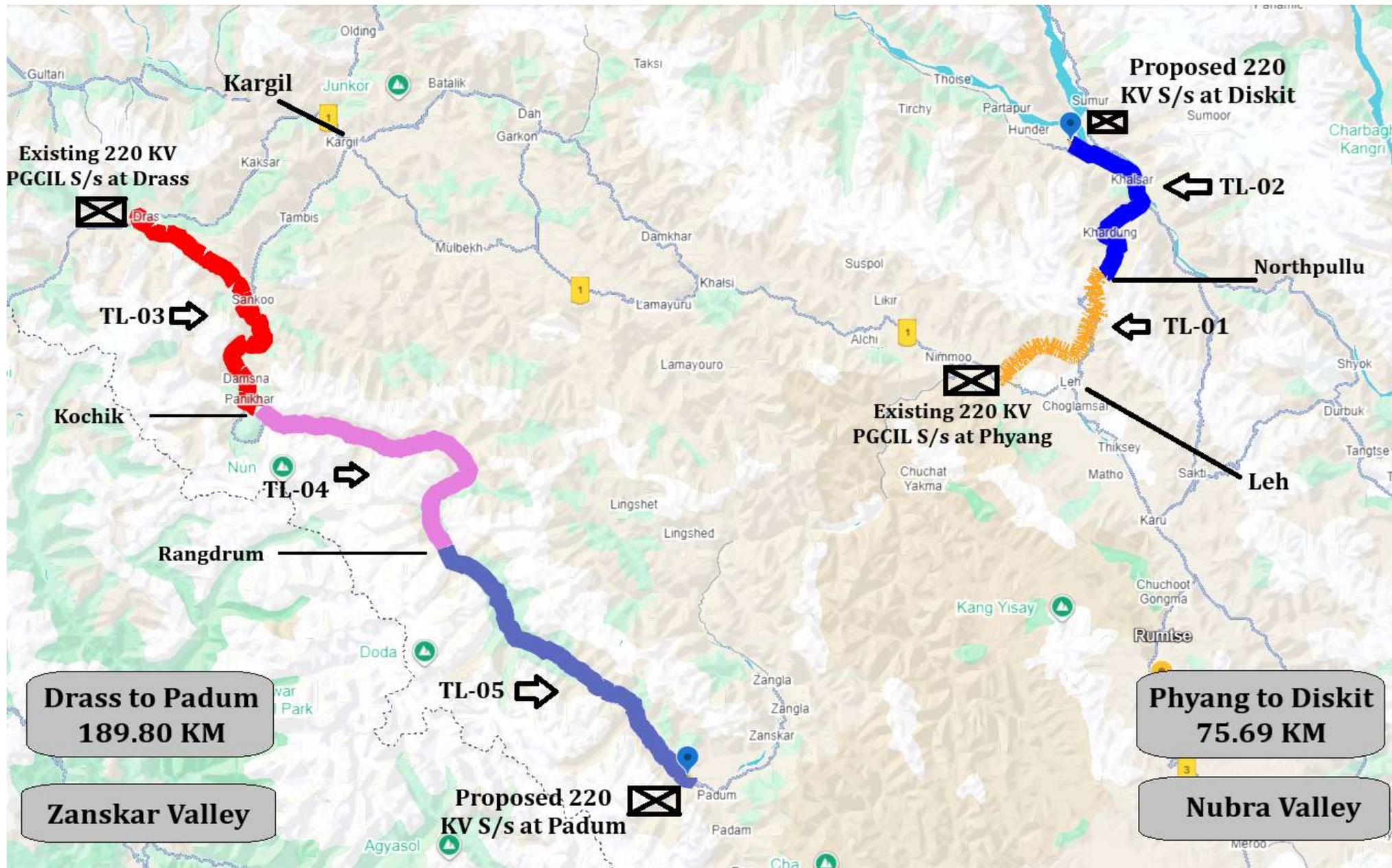
Total Duration of the work shall be 07 Weeks from Date of Notification of Award (T) issued to the Agency.

Milestone	Timeline*
Inception Report	T+ 1 week
Data collection and analysis	T+ 3 weeks
Draft Report & Presentation	T+ 6 weeks
Final Report	T+ 7 weeks

*T: Date of Notification of Award issued to the Agency

Deliverables: As per attached format of Term of Reference (ToR)

Geographical Map of PMDP Transmission Projects in Ladakh Region



Template of Standard Terms of References (ToR)

1.0 EXECUTIVE SUMMARY

2.0 OVERVIEW OF THE SCHEME

2.1 Background of the Scheme

- a) Brief write up on the scheme including objectives, Implementation Mechanism, scheme architecture/ design
- b) Name of Sub-schemes/ components
- c) Year of commencement of scheme
- d) Present status with coverage of scheme (operational/ non-operational)
- e) Sustainable Development Goals (SDG) Served
- f) Alignment with Viksit Bharat 2047 Vision
- g) Fund Flow mechanism (National and sub-national level)

2.2 Budgetary allocation and expenditure pattern of the scheme

Sub-scheme / component	[Year 1]			[Year 2]			[Year 3]			[Year 4]			[Year 5]		
	BE	RE	Actual												

2.3 Summary of past evaluation since inception of scheme

Year of Evaluation	Agency hired for Evaluation	Recommendations made and accepted	Recommendations made but not accepted
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3.0 METHODOLOGY

3.1 Sample size and sample collection process- The approach should be to derive a sample size based on some key output/outcome parameter of the scheme. The States/ Districts/Villages & UCBs could be graded in terms of performance of the states in these indicators and accordingly representation from each such Strata be finalized systematically. While doing so, regional representation in terms of Zones as per NSSO (consisting of States/UTs) and aspirational districts/ blocks may also be kept in mind.

3.2 Baseline data on Key Performance Index (KPIs): Baseline data on select KPIs (15 to 25 central to measure the effectiveness of the scheme in terms of its meeting the scheme objective to be collected: -

- (a) For New Scheme:** Baseline data to be collected through a baseline survey from the field. This could be done anytime during the commencement of the scheme to six months of it being in operation. This data and accompanying report are to

be kept safely by the M/Ds. This would be followed by a mid-line survey, ideally after 2-3 years of its operation.

(b) For Existing Scheme: Synthetic baseline data may be created using secondary and administrative data to which these KPIs are to be compared. In any case, the current evaluation data has to be stored properly to be used in the future as an anchor dataset to carry out proper analysis of the ongoing schemes.

3.3 Evaluation Tools used: Various evaluation tools can be used in the primary survey such as Household questionnaires, Key Informant Interviews, Focused Group Discussions, etc. This would depend on the focus and orientation of the scheme.

3.4 Data collection tools: Computer Assisted Personal Interview (CAPI) tools to be adopted.

4.0 OBJECTIVE OF THE STUDY

4.1 Effectiveness of the scheme in terms of achieving its intended objectives as per the scheme guidelines (To be analysed on the Output/Outcome/Impact indicators)

4.2 Additional parameters

a) Awareness and Coverage of Scheme-uptake by beneficiaries

State				District			
Urban		Rural		Urban		Rural	
Male	Female	Male	Female	Male	Female	Male	Female
SC/ST	SC/ST	SC/ST	SC/ST	SC/ST	SC/ST	SC/ST	SC/ST

- b) Assessment of implementation process and fund flow mechanism
- c) Training/ Capacity building of administrators/ facilitators, IEC activities etc.
- d) Asset/ Service creation, if any, assess adequacy and quality and & maintenance plan/ recurring expenditure associated with it
- e) Benefits (Individual, community)
- f) Convergence with the scheme of its own Ministry/ Department or of other Ministry/ Department and with the scheme of States/UTs.

4.3 Gaps in achievement of outcomes

4.4 Key Bottlenecks & Challenges

4.5 Input Use Efficiency

4.6 Best Practices/Case Studies

4.7 Most Significant Change (due to the scheme/ intervention)

5.0 OBSERVATIONS AND RECOMMENDATIONS

5.1 Thematic Assessment

- i. Improving **value for money** through identification of avoidable duplication and overlaps between different schemes
- ii. Assessing the continued **relevance** and their effectiveness and efficiency in achieving the intended objectives.
- iii. Reduction in **avoidable overhead expenditure** on consultants, programme management, administration etc.

5.2 Externalities

6.0 CONCLUSION

6.1 Issues & challenges (data must attempt to gather information on, but not limited to, the following)

Has the intervention caused a significant change in the lives of the intended beneficiaries?

How did the intervention cause higher-level effects (such as changes in norms or systems)?

Did all the intended target groups, including the most disadvantaged and vulnerable, benefit equally from the intervention?

Is the intervention transformative — does it create enduring changes in norms — including gender norms — and systems, whether intended or not?

Is the intervention leading to other changes, including "scalable" or "replicable" results?

How will the intervention contribute to changing society for the better?

6.2 Vision for the future

EXPLANATORY MEMORANDUM

- 2.1 (a)** Latest guidelines of the scheme may also be annexed.
- 2.1 (b)** Sub-schemes/ components which have separate budgetary allocations either through budget line or through Detailed Demand for Grants (DDG) may also be listed along with component-wise budget allocation.
- 2.1 (d)** Details of the number of states/districts/villages where the scheme is functional may be included.
- 2.1 (e) & (f)** May be linked with the objective of the scheme.
- 2.2** If DDG makes allocations for certain items which are not shown as sub-schemes/ components, the same may be separately indicated along with allocation in the table.
- 3.1** Complete list of states as classified by NSSO may be seen on its website.
- 4.1** Output/ Outcome Indicators as per the objectives of the scheme be specified for proper assessment of the scheme. Indicators as spelt out in SFC/EFC memorandum during appraisal of the scheme may also be utilized.
- Output/ Outcome/ Impact Indicators (numbers or percentage) must be compared with base year value at all time points (periodicity) as per monitoring mechanism framework, also defined in SFC/EFC Memorandums
- 4.2 (a)** Tabulated information up to Tehsil/ Block Level and if possible, up to village level may be provided.
- 4.2 (b)** focus should be on clarity of instructions, availability of scheme or programme guidelines, clear definition of roles and responsibilities of functionaries and the number and nature of clarifications/ additional instructions issued w.r.t. scheme guidelines. Details about training (PFMS/EAT module, scheme's portal or any other) with number of interventions and levels at which these interventions were carried out may be included.
- 4.3 (c)** Details about Stakeholders/ Beneficiaries, details of campaigns, media, frequency, feedback etc. may be included.
- 4.2 (f)** In primary survey, a facility checklist may be included to ascertain the quality and usability of such assets created under the scheme. Details about nature and type of convergence with national and state level schemes may be detailed out.
- Details about apparatus- manpower office transport etc. may be included. If there is no convergence, NIL may be recorded.

- 4.3 These gaps could be attributed to absence of interventions/ non-performance of existing interventions.
- 4.4 Focus may be of Financial, Administrative, Project Management and any other Key Bottlenecks & Challenges.
- 4.5 Details of (a) requirement of funds as indicated in EFC/ SFC in relation to actual allocation of funds including timelines of release (b) requirement and allotment of manpower in implementation of scheme/ Programme at various levels (PMU /Central/State) (c) Involvement of private players, volunteers, nongovernmental organizations and local community etc. in the scheme may be provided.
- 4.6 Description of the Best Practices and Case Studies- Since evaluation is to record both what is working and what is not, therefore, the best practices should be recorded in detail, facilitating replication.
- 4.7 Most Significant Change: This information is to be gathered from primary survey w.r.t what one thing that the scheme has been able to achieve in the most significant way.
- 5.1 Thematic assessment should focus on Accountability, Transparency, Employment generation (direct/indirect), Climate change and sustainability, Role of TSP/SCSP, Use of IT, Behavioural change in stakeholders/ beneficiary, R&D, Role, functions, involvement/ support of State govts.

Evaluation of public interventions and policies needs to recognize the scarcity of resources, fiscal affordability **and the 'zero sum game' that plays out in resource allocation.** In a developing country like ours which faces multiple social, economic and environmental challenges, availability of public resources amongst competing demands will always be limited. Priority setting and resource allocation are vital questions to be addressed, and evaluation needs to assist in this. While interventions may be chosen to maximize specific objectives, they all are constrained with respect to practical and budgetary issues. Hence, evaluation recommendations should not routinely assume enhanced funding. If felt essential, alternative non-base case recommendations may be made separately.

Cross cutting themes can be assessed both through secondary data as well as primary. While conducting meta-analysis of existing reports, the evaluator should actively review the cross-cutting themes. The primary data for cross cutting themes will be elicited through specific questions and responses during the key informant interviews and beneficiary surveys. For example, use of IT in scheme implementation, fund flow, monitoring and evaluation can be assessed from interaction with concerned ministries/ departments as well as states officials. Similarly, gender mainstreaming can be assessed by introducing specific questions on changes in knowledge, attitude and practices pertaining to gender equality, attributable to the CS intervention at hand, through household surveys.

5.2 Details best practices, innovations or schemes/ projects where best practices were replicated may be provided.

6.3 It is essential to highlight the importance of recommendations for the scheme. The evaluation agency may provide recommendations for the scheme in any of the following categories (a) Continue in existing form (b) Continue with some Modifications (suggest modifications) (c) scale up the scheme (Financial/ Physical/ both) (d) Scale down the scheme (Financial/ Physical/ both) (e) Close (f) Merge with another scheme as sub-scheme/ component. [for further details see comments for para 5.1]

EVALUATION OF SCHEMES - CONCEPTUAL NOTE

Evaluation contributes fundamentally to sound public governance. It can help governments improve the design and implementation of public policies that, in turn, can lead to prosperity for their country and well-being for citizens. Evaluation contributes to promoting public accountability, learning and increased public sector effectiveness through improved decision-making. Evaluation is critical to ensure that policies are actually improving outcomes by bringing an understanding of what works, why, for whom, and under what circumstances.

2. Budget Speech of 2016 spelt out the vision of the Government with regard to the appraisal and approval cycle that CSSs and CSs would need to follow after the end of the planning cycle, of which 12th Five Year Plan was the last. The government mandated that *'every new scheme being sanctioned by the Government will have a sunset date and outcome review'*. For the XVth FC cycle NITI Aayog had undertaken evaluation of 28 umbrella schemes. Evaluation of other CSs/CSSs schemes was undertaken by the respective Ministries/ Departments. For the current FC cycle too, NITI Aayog is conducting evaluation of CSSs.

Evaluation Criteria

3. Broadly, evaluation of schemes can be categorised into six — relevance, coherence, effectiveness, efficiency, impact and sustainability. It is important that the definitions of the criteria are understood within the broader context to make evaluation useful and of high quality. There are two basic guiding principles which must be applied to any evaluation-
 - a. that it should be contextualized (what is that the evaluation is trying to find out and what is the intended purpose of evaluation?)
 - b. time and resources may be deployed based on the purpose of evaluation which may take into account data availability, timing and methodological considerations.

Relevance - Relevance is a pertinent consideration across the programme or policy cycle from design to implementation. It can be analysed via four potential elements for analysis: relevance to beneficiary and stakeholder needs, relevance to context, relevance of quality and design, and relevance over time. They should be included as required for the purpose of the evaluation and are not exhaustive.

The evaluation of relevance should start by determining whether the objectives of the intervention are adequately defined, realistic and feasible, and whether the results are verifiable and aligned with current international standards for development interventions.

Coherence — Coherence brings in increased focus on the synergies (or trade-offs) between policy areas and the growing attention to cross-government coordination. It identifies situations where duplication of efforts or inconsistencies in approaches to implementing policies across government or different institutions can undermine overall progress. This criterion also encourages evaluators to understand the role of an intervention within a particular system (organisation, sector, thematic area, country), as opposed to taking an exclusively intervention- or institution-centric perspective.

Effectiveness - Effectiveness helps in understanding the extent to which an intervention is achieving or has achieved its objectives. It can provide insight into whether an intervention has attained its planned results (OOMF), the process by which this was done, which factors were decisive in this process and whether there were any unintended effects. .

Efficiency - This criterion is an opportunity to check whether an intervention's resources can be justified by its results, which is of major practical and political importance. Efficiency is about choices between feasible alternatives that can deliver similar results within the given resources. Before cost-effectiveness comparisons can be made, alternatives must be identified that are genuinely feasible and comparable in terms of quality and results.

Impact - Under this criteria ToRs must be designed so as to allow for such information to be captured as to whether or not the intervention created change that really matters to people. It is an opportunity to take a broader perspective and a holistic view. .

Questions that the impact criterion might cover include:

- Has the intervention caused a significant change in the lives of the intended beneficiaries?
- How did the intervention cause higher-level effects (such as changes in norms or systems)?
- Did all the intended target groups, including the most disadvantaged and vulnerable, benefit equally from the intervention?
- Is the intervention transformative — does it create enduring changes in norms — including gender norms — and systems, whether intended or not?
- Is the intervention leading to other changes, including "scalable" or replicable" results?
- How will the intervention contribute to changing society for the better?

Sustainability - The role of evaluation here can be to scrutinise assumptions in the theory of change for how sustainability is achieved. One important question which needs to be asked is whether the impact will be sustainable once fiscal support from the government is removed.

Evaluation of Schemes — DoE's specific requirements

4. Evaluation of public interventions and policies needs to recognize the scarcity of resources and fiscal affordability. An evaluation which concludes that more financial

support for a scheme would make it effective in achieving its outputs and outcomes. misses the core point of limitation of resources and the 'zero sum game' that plays out in resource allocation. In a developing country like ours which faces multiple social, economic and environmental challenges, availability of public resources amongst competing demands will always be limited. Priority setting and resource allocation are vital questions to be addressed, and evaluation needs to assist in this. While interventions may be chosen to maximize specific objectives, they all are constrained with respect to practical and budgetary issues. Hence, evaluation recommendations should, at least as a base case, assume constant real level of budget and should not assume enhanced funding. If felt essential, alternative non-base case recommendations may be made separately.

5. The evaluation exercise should, inter alia, aim at reducing/ rationalising excessive number of Centrally Sponsored Schemes and other schemes (also recommended by Expenditure Management Commission and Finance Commission), avoiding waste arising from duplication and 'opening of shops' by each Ministry, reduction in wasteful expenses (including excessive use of consultants, administrative overheads etc.). Management of funds that flow from the Centre to the States for implementation of CSSs and implementing agencies under CSs also needs to be factored to avoid parking of funds by agencies/ states. While the template TOR attempts to capture the essence of all the above listed concepts, DOE recommends that ToRs for evaluation of schemes may be modified to adequately reflect these issues enabling the evaluation process to capture such data/ information.
6. Hence, apart from fiscal affordability, evaluation of schemes should focus on:
 - i. Improving **value for money** through identification of avoidable duplication and overlaps between different schemes
 - ii. Assessing the continued **relevance** and their effectiveness and efficiency In achieving the intended objectives
 - iii. **Reduction in the number of schemes**, especially schemes of small size, through closure/ merger of irrelevant/ low value-adding schemes
 - iv. Reduction in **avoidable overhead expenditure** on consultants, programme management, administration etc.
7. Based on the data/ information captured during the evaluation process the following must be identified and appropriate action taken:
 - Schemes with similar objectives/ overlaps (intra/ inter Ministry/ Department) must be considered for merger/ closure
 - Schemes having backward and forward linkages (schemes, which are presently being implemented independently, but will be more effective if they are combined/ merged) must be considered for merger.
 - Schemes which have lost relevance over the period of its implementation (this may include a component of the scheme as well) must be considered for closure.
 - Schemes with minimal prima facie impact on account of inadequate budget must be considered for closure.
 - Schemes with low budgetary utilization must be considered for closure.