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# Action Plan for Development of a Ballast Standard and Labeling Program

Nepal

 **Nexant**

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**Action Plan for  
Development of a Ballast Standard and Labeling Program**

**Nepal**

**Prepared for**

**United States Agency for International Development**

**Under**

**South Asia Regional Initiative for Energy**

**Prepared by**

**Nexant SARI/Energy**

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## List of Acronyms

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AS/NZS	Australia/New Zealand standard
BLF	Ballast Lumen Factor
IIEC	International Institute for Energy Conservation
MEPS	Minimum Energy Performance Standard
NEA	Nepal Electricity Authority
NBSM	Nepal Bureau of Standards and Metrology
SARI/Energy	South Asia Regional Initiative on Energy
S&L	Standards and Labeling
USAID	United States Agency for International Development

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## Executive Summary

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Under the technical assistance and training components of the South Asia Regional Initiative on Energy (SARI/Energy) project, a number of activities to promote energy efficiency standard setting and labeling of end-use appliances in the region have already been introduced. These activities are directed at assisting the local standard setting institutions to understand the benefits from energy efficiency standard setting and labeling, communicating the role and benefits from energy efficiency standards in competitive markets, and developing a mechanism and a network for regional standard setting. This report proposes an Action Plan for development of an energy standards and labeling program for fluorescent lamp ballasts in Nepal. The report was presented, discussed, and finalized at a national seminar in Kathmandu on September 23, 2003.

This report presents:

- An international review of ballast standards, including lessons learned from the Sri Lankan ballast labeling program and an in-depth analysis of the Australia/New Zealand ballast standards
- An overview of the Nepali ballast market
- An impact assessment of an S& L program in Nepal; and
- A proposed action plan for development of a ballast standard and labeling program in Nepal and initial recommendations for monitoring and enforcement of the program

The overview of the Nepali ballast market is based on information gathered through interviews with key Nepali stakeholders. The Nepali market, not surprisingly, shows strong similarities with the efficiency level and market structure of the Indian ballast market, for which a comprehensive market study is made available (Appendix C).

The impact assessment is based on using these market data and applying a scenario approach to assess the potential benefits from a standards and labeling (S&L) program for ballasts in Nepal. The key result is as follows:

*A focused, five-year program could give cumulative energy savings in the range of 27,000-43,000 MWh, and a reduction in peak power demand in the range of 7-12 MW. The total societal benefit is estimated to be around US\$ 18 million.*

The proposed action plan for development of a ballast standards and labeling program in Nepal is a logical, step-by-step plan accompanied by a tentative implementation time schedule.

The central tasks of this action plan are:

1. Develop an institutional structure for the ballast program
2. Develop a safety, quality, and energy performance standard for ballasts
3. Establish a system for certifying testing and registering label for each product
4. Develop a ballast energy label

5. Establish efficiency threshold for labeling and a minimum energy performance standard (MEPS)
6. Design and implement ballast program
7. Market and promote the program approach
8. Monitor and enforce the program on an ongoing basis; and
9. Evaluate and adjust the program

A National Seminar was held on 23 September 2003.<sup>1</sup> The seminar was attended by more than 60 people, and there was active discussion about regional experiences in promoting energy standards and labeling, as well as the Nepal market study and proposed Action Plan for ballasts. The main outcomes and agreements of the meeting are listed below:

- *Ballast program cost effective:* The described ballast standards and labeling program is very cost effective and should be pursued by the government of Nepal
- *NEA lead implementing agency:* The Nepal Electricity Authority (NEA) will be the lead implementing agency for the ballast standard and labeling program
- *NBSM the lead on standards:* The National Bureau of Standards and Metrology (NBSM) has developed draft standards for safety and general performance of ballasts, based on the relevant IEC standards. Additional standards for energy performance will need to be developed
- *Budget allocation needed:* In order for the program to proceed, the Nepal government will need to allocate a budget and clear responsibilities for program implementation, enforcement, etc
- *Social marketing:* The Action Plan was modified to include a clearly specified Social Marketing and Program Promotion activity (Task 7)
- *Manufacturer input:* As result of the discussion at the National Seminar, the Consultant had additional meetings with Nepali ballast manufacturers. This led to refinement of the market assessment, and an indication that the manufacturers could support a well-designed ballast standards and labeling program
- *Expand stakeholder committee:* The proposed Stakeholder Committee should be expanded to include the Nepal Engineering Association, Consumer Forum, and ESCO Nepal
- *Transformer labeling:* Strong interest in the possibility of a program for the labeling of transformer efficiency has been expressed

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<sup>1</sup> National Seminar on Energy Efficiency Standard Setting and Labeling of End-Use Appliances.