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Recommendations for Manifesto

Ministry of Energy, Water Resources and Irrigation

1. National Energy Storage Framework

Nepal lacks a dedicated roadmap for Pumped Storage Hydropower (PSH) and Battery Energy Storage Systems (BESS).

a. A National Energy Storage Policy must be issued, legally classifying storage as a distinct asset class to allow for proper licensing.
b. Establish a standard Power Purchase Agreement (PPA) framework for storage that includes capacity charges and compensation for ancillary services like frequency control.
c. Create an Energy Storage Coordinating Body within MoEWRI to integrate storage into long-term grid planning.

2. Electricity Subsidy and Tariff Reform

The current model relies on high cross-subsidies where industrial users pay above-cost tariffs to support residential users.

a. Move away from broad household discounts toward targeted social support using national poverty registries.
b. Increase the units allocated for domestic lifeline rates to better support the livelihoods of impoverished households.
c. Publish a Unified Subsidy and Tariff Policy that includes regionwise structures based on reliability and socio-economic status.

3. Strengthening Renewable Energy Deployment (AEPC & NEA)

To eliminate operational overlaps and wasteful expenditure between the Alternative Energy Promotion Centre (AEPC) and the Nepal Electricity Authority (NEA), the following is recommended:

a. AEPC must require a recommendation letter from the NEA before bidding on any new projects to ensure the area is not planned for near-term grid expansion.
b. Subsidies for Solar Water Pumping (SWP) and Institutional Solar Power Systems (ISPS) should only be approved for verified off-grid areas.
c. In rehabilitation projects, local governments should manage civil works, while AEPC manages technical electro-mechanical components.

4. Transmission Infrastructure and Financing

Transmission development is hindered by land acquisition and Right-of-Way (ROW) issues.

a. Amend frameworks to simplify and lower the cost of land acquisition.
b. Deploy AI and UAV-based systems for preventive maintenance in rugged mountainous terrains.
c. Use blended finance models to combine government funds with private sector and international development investment to close funding gaps.

5. Climate Risk and Hydro-met Monitoring

Nepal's high-risk glacial lakes and fragmented data systems require urgent attention.

a. Establish a cross-ministry task force to coordinate monitoring and response for Glacial Lake Outburst Floods (GLOF).
b. Make hydro-met data openly accessible to stakeholders and integrate AI/ML models for weather "nowcasting".
c. Repair non-functional stations and deploy low-cost sensors in under monitored northern high-altitude regions.

6. Future Strategic Opportunities

MoEWRI should explore emerging sectors to utilise excess hydropower, including:

a. Developing green hydrogen and green ammonia for fertilizers and fuel.
b. Powering supercomputers and datacenters.
c. Adopting a Water-Energy-Food-Ecosystem (WEFE) Nexus approach for holistic sectoral coordination.

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