

SOUND POLICY PRINCIPLES FOR ENCOURAGING MINI-GRID PROJECTS

- **Mainstream the mini-grid option into national rural electrification policy, providing communities with real choice between grid extension, standalone renewables and mini-grids, based on local context and specific energy needs. Subsidies and other incentives need to reflect this, being offered for all three methods of electrification.**
- Set up state funding mechanisms for mini-grids: subsidies, loans or grants, investment in RESCOs. Some level of subsidy will almost always be necessary, since rural electrification all over the world has almost always involved state subsidy in some form or another.¹
- Establish strong local/regional regulatory bodies with the capacity to oversee large projects and the clout to enforce regulations. Governments need to assign clear responsibility for rural electrification to dedicated bodies.²
- Provide channels by which co-operatives or private-sector energy service companies can access government subsidies (or other existing support) for rural electrification.
- Use parliaments to ask that governments request foreign aid donors to divert some of the international assistance allotted to big energy infrastructure projects like large dams and instead invest in mini-grid projects (this is particularly pertinent to aid channelled through the World Bank!).
- Provide risk guarantees, tax cuts or other market concessions to private investors supporting mini-grid projects.
- Use state resources to conduct large-scale feasibility studies, market assessments and meteorological surveys (for wind and solar) – or get governments to lobby donors and international institutions to carry out such studies.
- Employ participatory consultation techniques to ascertain villagers' specific requirements and explore their concerns before embarking on a mini-grid project which may be inappropriate. Design services in such a way as to acknowledge that the scale of mini-grids makes them particularly suitable to adaptation to suit local circumstances.
- Introduce subsidy policies based on the principle of lifeline tariffs (AKA 'minimum affordable rates'). Subsidies will almost always be necessary to support connection/initial investment costs and may also include 'transition subsidies' to support operation and management and maintenance (O&M&M) costs, but it is important to design them in such a way as to avoid

¹ cf. World Bank Renewable Energy Toolkit [henceforth WBRET] – P & R framework.

² DfID (2000) [Best Practices for Sustainable Development of Micro Hydro Power in Developing Countries, Smail Khennas and Andrew Barnett, the Department for International Development, UK and The World Bank](#)

having a “negative influence on the rational use of energy” (WBRET – Subsidy Mechanisms). Subsidies could also be given directly to the consumer in cases where “there is a diverse customer set with a wide variation in their ability to pay” (ibid.).

- Provide training to equip villagers with the skills and information necessary to effectively establish and run mini-grid co-operatives → special training programmes in rural renewable energy? integration into university and other state education curricula?
- Develop a Feed-In Tariff for mini-grids, which allows individual households and businesses to feed energy into a mini-grid in much the same way as they would sell energy into the national grid under a standard FIT.
- ‘Devolved’ regulation – legislate to allow regional or local regulatory bodies to set their own tariffs and subsidy levels appropriate to local circumstances.
- Governments need to set and enforce safety standards – particularly where mini-grids will be operated by local co-operatives or other non-specialists.
- The WBRET states that government regulations should:
 - “Permit private sector participants to entry the market for supply of electricity.”
 - “Ensure fair competition for all suppliers with respect to the traditional utility in competing for new customers.”
 - “Establish an enabling regulatory framework that has clear separation of responsibilities and allows “light-handed” procedures and processes for small, stand-alone systems.”
 - “A clear separation of responsibilities requires that separate departments have distinct responsibilities for (i) planning, monitoring, policy setting, licensing and permits, (ii) establishing/promulgating regulations, (iii) compliance (“regulator”), and (iv) conflict resolution, arbitration, and adjudication in cases where an involved party wishes to appeal a finding of the regulator.”
 - “Light-handed procedures and processes allow for simplified regulatory procedures and decentralized administration for mini-grid and stand-alone power systems. In particular, it is critical to minimize the number of regulatory requirements/decisions, the number of government entities making separate decisions, and the amount of information required from the entities performing electrification.”
- The WBRET also proposes a guiding principle for sustainability of mini-grid systems: the subsidy should cover the initial investment costs, whilst the tariff should be able to cover costs of operation, maintenance and management. This ensures the long-term viability of the grid, and makes renewables a more attractive option than diesel generators, which are costly to run and are subject to fuel-price volatility.

- From DfID (2000): “Plans for the expansion of the electricity grid should be rule based, and in the public domain to reduce the uncertainty about when the grid will reach a particular location. Clear rules should be published regarding the actions the grid supplier must make to compensate micro hydro owners when the grid arrives (either to buy out the plant at written down costs or to buy the hydro electricity produced).”