

BARRIERS TO FINANCING RENEWABLE ENERGY PROJECTS

**THE SMALL HYDROPOWER EXPERIENCE-AN IPP
PERSPECTIVE**

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**THIRD RENEWABLE ENERGY AND DISTRIBUTED
GENERATION TASK FORCE MEETING**

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SAN DIEGO, CALIFORNIA

INDIA HYDROPOWER DEVELOPMENT COMPANY, LLC

A US-BASED HYDROPOWER DEVELOPMENT
COMPANY

MEMBERS: DODSON-LINDBLOM INTERNATIONAL, INC.
FRANKLIN PARK INDIA, LLC



FRANKLIN PARK

DODSON-LINDBLOM INTERNATIONAL, INC.

- **International division of DLZ Corporation based in Columbus, Ohio**
- **Specializing in small hydropower development**
- **Active in India since 1994**
- **Developed first ever private hydro by an IPP in India**
- **Have three operating projects totaling 50 mw**
- **Started construction of three projects totaling 13 mw**
- **Played a pioneering role in India**
- **Funded projects with multi-laterals, bi-laterals, local DFI's and local banks**

FRANKLIN PARK INDIA

- **Subsidiary of Franklin Park International and Guggenheim**
- **Investment company specializing in infrastructure projects worldwide**
- **Partnering with DLI for development of power projects in India**

Barriers

In no specific order:

- **Technical**
- **Political**
- **Policy**
- **Social**
- **Environmental**
- **Operational**
- **Physical**
- **Financial**
- **Legal**
- **Cultural**

Examples of Barriers

- **Lack of Quality and Quantity of Data**
- **Policies not conducive to financible projects**
- **Financeability of PPA's**
 - **Excessive Royalties**
 - **Off-taker Risk**
 - **Availability of payment security mechanisms**
 - **Flat power prices with no provisions for escalation**
- **Non-availability of power evacuation facilities**
- **Non-availability of project access**
- **Inordinate delays in providing clearances and approvals**

Examples of Barriers continued

- **Changing policies**
- **Increasing costs of mandatory socio-environmental benefits**
- **Escalating project costs with no redressal through power tariffs**
- **Disconnect between policy making and policy implementation**
- **Sanctity of agreements**
- **Confusing tax laws**
- **Lack of objective water use planning**
- **Lack of clear tariff-setting guidelines that are applicable to wide variety of project settings**
- **Significant documentation from multi-laterals and bi-laterals for financing small R.E. Projects**
- **Disproportionately high legal costs**
- **Availability of credit enhancement mechanisms**

Financing Barriers

- **Eventually all factors/barriers are reduced to justification of a project by numbers**
- **Hence all barriers ultimately roll into financing barriers**

Financing Mechanisms

- **Corporate Finance**

- **Based on a Company's Balance Sheet**
- **Company guarantees all obligations**
- **All risks on Company**
- **Faster financing process, since lender has full recourse to Company**
- **Limited to large Companies with healthy Balance Sheets**
- **Hydropower projects are capital intensive and this mechanism is not workable in most situations**
- **Would need Credit Enhancement Mechanisms**

Financing Mechanisms continued

- **Project Finance**

- **Non-recourse or Limited recourse**
- **Early risk is on IPP, shifts to Contractor during construction and finally to financiers after COD**
- **Preferred financing mechanism for most projects**
- **Burden of Due Diligence is very high**
- **Need to identify all possible risks and mitigation mechanisms**
- **Significantly higher up-front costs**

Who is funding? And How?

- **Local Banks Averse to Project Finance**
 - **Understanding of Project Finance is Limited**
 - **Do not have the expertise or resources to truly identify and mitigate risks**
 - **Recognize cultural barriers and hence try to stay away from this approach**
 - **DFI's (local or international) play a key role in facilitating financing in local markets- usually a Government role**
 - **Even DFI's uncomfortable with a Project Finance approach and tend to use a blended Corporate/project Finance approach**

Who is funding? And How? continued

- **Need for Multi-Lateral and Bi-Lateral Institutions**
 - **Limited understanding of local markets**
 - **Rely heavily on home office and local counsel (not all are knowledgeable of details and nuances)**
 - **Need identification and mitigation of all known and potential barriers in definable manner**
 - **Usually a problem with local authorities, who conversely do not have an understanding of the need or motivation of financier requirements**
 - **With most local barriers, IPP's usually on shifting sands trying to aim at moving targets**

Who is funding? And How? continued

- **Need for Multi-Lateral and Bi-Lateral Institutions**
 - Results in inordinate delays and spiraling costs
 - Frustration among most project participants
 - Often local authorities get fed up and want to cancel awarded projects on which significant work and investment has occurred
 - Most R.E. projects cannot afford this

- **Catch-22 Situation for most IPP's**

Biggest Barrier of All

- **Cultural Barrier**

- **All barriers are eventually linked to this in some form or another**

SUMMARY

- **Issues are complex and vary by country, region and project**
- **No quick fix**
- **Incremental steps needed to shorten gap between costs and revenues (and to reduce time)**
- **Governments have the biggest role in facilitating solution**
- **Market is tremendous and needs encouragement for sustainable development of renewable resources**

SOLUTIONS

● **Educate and Learn**

- **Facilitate formal and informal discussions in different settings with multi-country participation to promote dialog and understanding**
- **Provide expert advice/input**
- **Promote local and international meetings and training sessions**
- **Include all stakeholders, including financiers, policy makers and private industry at various levels in their internal hierarchy**

● **Implement**

- **Policies and procedures to be adjusted to reflect mechanisms designed for success (applies to governments and financing agencies)**
- **Promote and participate in meetings to provide feedback to the stakeholder community to encourage participation**
- **Local agencies to implement more objective mechanisms to expedite approvals**

SOLUTIONS continued

- **Need Data!!!!**
 - **Support for local agencies/private industry in target markets to facilitate collection and dissemination of reliable and sufficient data to make investment decisions**
- **Support for Socio-Environmental Needs**
 - **Local Developmental Needs**
 - **Access to project locations**
 - **Grid Connectivity**