

Rajasthan State Power Corporation Ltd. (RSPCL) **Institutional Analysis**

1. OVERALL INSTITUTIONAL SETTING

1.1 Purpose of RSPCL

Since the early 1990s, the Government of Rajasthan (GOR) has recognised the need for a special purpose organisation to implement and operate power generating projects based on renewable energy sources, such as the one planned for Mathania. RSPCL was therefore founded in 1995 by GOR as a limited liability company specifically for this purpose. The alternative of integrating these activities within the Rajasthan State Electricity Board (RSEB), would not have resulted in the greater autonomy and flexibility that has been obtained by founding RSPCL as a limited liability, i.e. a board -managed company.

The Memorandum of Association provides RSPCL with a broad scope of activities in the power sector, including activities in

- thermal, hydro, gas, solar, wind and other non-conventional and renewable energy based power generation;
- transmission and distribution of electricity;
- consulting in the power sector;
- PPP power schemes, and
- manufacturing of and trading in parts, equipment and machinery related to the power sector.

At present it is understood, however, that the main purpose of RSPCL is to promote, develop and operate renewable energy based projects, most importantly the Mathania ISCC project.

1.2 Legal base

RSPCL is registered as a limited liability company under the Indian Companies Act of 1956 with headquarters in the state capital Jaipur. The authorised share capital is iRs 50 million, divided into five million shares of iRs 10 each. By the end of 1999, GOR had paid in iRs 16 million. As 100% of the equity contribution has been made by GOR, the RSPCL is considered a Government Company under Section 619 of the Companies Act.

Even though it is classified as a Government Company, RSPCL enjoys considerable autonomy and freedom under the Companies Act to carry out its business. In cases where Government circulars could involve restrictions on the management, these can, according to RSPCL management, be overcome either by obtaining exemptions or by choosing different arrangements, such as contracting personnel instead of hiring them under civil service contracts. From a legal point of view there do not appear to be any real impediments to the commercial functioning of RSPCL.

1.3 Overall structure

The highest decision-making body is the General Meeting of the shareholders (subscribers), which has to take place at least annually. Routinely, the General Meeting handles "the business relating to

- (i) the consideration of the accounts, Balance Sheet and the reports of the Board and Auditors,
- (ii) the declaration of dividends,
- (iii) the appointment of Directors in the place of those retiring, and

- (iv) the appointment of and the fixing of the remuneration of the Auditors."

Apart from these routine responsibilities, the General Meeting decides on overall policy and strategic issues. In addition to the annual General Meeting, extraordinary General Meetings can be called for. So far, 3-4 meetings have taken place annually.

The Board of Directors is appointed by the General Meeting and the Governor of Rajasthan. Board size can range from three to twelve members, with the Governor having the power to appoint upto four directors. At present, four Directors have been appointed. These include representatives from the Energy, Planning and Finance Departments of the GOR and the Managing Director of RSPCL, who is an IAS civil servant. To further strengthen the commercial orientation, RSPCL plans to include additional Directors from the private sector and from the financial sector, especially from those institutions or companies having a long term interest in the promotion and development of renewable energy based power projects.

The Board meets at least once in every three months and can be convened by any one of the Directors. The Chairman of the Board is appointed by the Governor of Rajasthan. The Board is entitled to exercise all such powers and perform all such acts that the Company is authorised to exercise and do. The Board has the discretion to delegate their powers to the Managing Director and/or Executive Director, except for the power to

- (i) make calls on shareholders in respect of money unpaid on their shares;
- (ii) issue debentures;
- (iii) borrow money otherwise than on debentures;
- (iv) invest the funds of the Company, and
- (v) to make loans.

The day-to-day management of RSPCL is handled by the management team, consisting of the Managing Director (appointed by the Governor) and one or more Executive Directors (also appointed by the Governor), and the staff.

Generally, the overall management structure for RSPCL provides, in the context of Indian conditions, an appropriate framework for allowing efficient implementation and operation of the Mathania project. Though RSPCL enjoys a large degree of managerial autonomy, there is considerable room for political involvement. GOR is the sole shareholder; the Governor of Rajasthan makes decisive appointments (upto one third of Directors, Chairman of the Board, Managing Director) and has the power to issue directives that he may consider crucial for company policy. At time of appraisal, indications were that GoR used its political influence wherever possible to promote and push the project.

1.4 External relations

So far, the most important external relations of RSPCL have been with the GOR, GOI and with the donors, i.e. World Bank and KfW. The relationship with GOR is a very intimate one. With GoR taking a strong political interest in making this technologically advanced and internationally high-profile Project a success, it is likely that this close link will continue to be quite helpful to RSPCL in the future.

Still somewhat unclear is the relationship with REDA (Renewable Energy Development Agency) and how responsibilities will be divided between REDA and RSPCL. It is expected that as RSPCL expands, the role of REDA will shrink to dealing mostly with small projects and small-scale research. It is also conceivable that REDA will cease to exist, with RSPCL taking over all their activities. However, such a decision should be carefully considered as there is a danger that an RSPCL burdened with too many different activities will not concentrate sufficiently on its core business, i.e. especially the Mathania project.

The relationship with the donors has in the past been largely managed by GOI, specifically MNES (Ministry of Non-Conventional Energy Sources). It is only since the beginning of 1999 that RSPCL has taken a much more active role, managing this relationship quite successfully. As long as the top management of RSPCL remains as competent as it is at present, the relationship between donors and RSPCL will serve the purpose of the project.

During implementation and the first five years of operation, RSPCL will be very much dependent on the EPC/O&M contractor. How successful this relationship will be, will depend largely on the care with which the contractor will be chosen, the quality of the contract and the quality of the people executing the contract. The assistance given to RSPCL by the consultants will be crucial in this respect. Generally the arrangements as foreseen here do not carry any undue risk.

In the operations phase, RSPCL will have to enter into two largely new external relations. One is with the power purchaser, the other with the fuel supplier.

RSPCL will have to deal with a single point customer relationship. With the restructuring of the power sector in Rajasthan, all the electrical energy generated will have to be sold to the state grid operator (Transco). As both RSPCL and Transco are in the public sector and effectively under the control of the Department of Energy, dealings between the two companies may be influenced by political interests of GoR. This may involve a special risk for RSPCL, especially when Transco is in danger of defaulting. These risks can be mitigated by establishing legally enforceable commercial relations with the power purchaser, including an appropriate securitisation arrangement.

For continuous operations, reliable fuel supply linkages are crucial. Before conclusion of the EPC/O&M contract, a fuel supply agreement (FSA) will have to be finalised so that RSPCL will have the flexibility to negotiate conditions more freely. The FSA should ensure security of supplies for the project and not saddle RSPCL with extraordinary fuel risks.

In summary, the structure of external relations is not too complex and does not carry any undue risks. However, special care need to be taken in selecting the EPC/O&M Contractor and subsequently in managing the relationship between RSPCL and the contractor.

2. PAST AND PRESENT SITUATION

2.1 Scope of activities

As mentioned, RSPCL has recently taken a much more active role in the promotion of the Mathania Project and in expanding its business portfolio. This is largely due to the appointment of a new Managing Director in 1999 (who has been again replaced in July 2000). RSPCL views its development basically in three broad phases:

Phase 1 (includes projects in the final preparatory or implementation phase):

- (i) Mathania Project (140 MW);
- (ii) Wind energy project at Jaisalmer (2 MW), and
- (iii) Wind energy project at Devgarh, Chittorgarh (2,25 MW).

Phase 2 (includes projects which are firmly planned):

- (i) Rural electrification, including biomass, photovoltaic, wind-diesel hybrid projects (2.5 MW);
- (ii) Wind farm estate joint venture (20-25 MW);
- (iii) Four small hydropower stations on BOT basis (7.5-10 MW), and
- (iv) Take over of RSEB's 10 small hydropower stations (23 MW).

Phase 3 (includes projects in the preparatory/conceptual stage):

- (i) Wind farm projects (100 MW);
- (ii) Central receiver/parabolic dish based power project of about 50 MW in conjunction with a 1.000 MW LNG project;
- (iii) Rural electrification using photovoltaic technology (10 MW), and
- (iv) Demonstration project for parabolic dish technology (10 MW).

This is an ambitious development programme. For the time being, the Mathania Project is by far the most important one. The challenge for RSPCL management will be to ensure that attention remains focussed on the larger projects and that operations are not neglected by paying too much attention to the development of new business.

It should be noted that RSPCL generally plans to carry out the above projects on a similar basis to Mathania, i.e. with an EPC/O&M contractor who would build the plant and subsequently operate it for a number of years.

2.2 Organisation, management structure and personnel

Given the initially limited scope of activities, the organisational structure has also been kept basic. At the end of 1999, the core team consisted of a Managing Director (IAS civil servant), a Financial Manager (previously with the private sector), a Manager (Technical, previously with REDA) and an Engineer (deputed by RSEB). In addition some auxiliary personnel have been employed and use is made of REDA staff. The offices are in the REDA building in Jaipur.

So far, this has been an appropriate, sufficiently skilled organisational set-up. In order to cope with the increasing workload, RSPCL in May 2000 has filed with GoR an application for additional 13 posts in the headquarter and six posts at the project site. Until August 2000, GoR did not decide on the application, although an increase in staff is considered indispensable by all parties.

2.3 Finances

The development expenditures for Mathania and more generally for RSPCL, totalling iRs 10 million, have so far been financed by GOR as equity. For the Jaisalmer wind energy project, the total investment has been about iRs 75 million, of which half has been financed through a MNES grant and the other half through various loans and suppliers credits. For the Devgarh wind farm, a similar financial arrangement of the same magnitude is planned. At the end of FY 1998/99, total assets and liabilities stood at Rs 17.5 million (US\$ 0.4 million). With the engagement in the wind farms and the commencement of the implementation phase of Mathania, total assets grow to iRs 200 million (US\$ 4.5 million) by the end of FY 2000/2001.

At present, RSPCL only earns a small amount of revenue from the Jaisalmer project, with a negligible amount of cash generation.

3. FUTURE SITUATION

3.1 Scope of activities

If RSPCL broadly follows the development phases outlined above, its project portfolio will consist of one large project, i.e. Mathania, and numerous smaller ones. However, if it also undertakes the large LNG project, then there is a risk that Mathania would suffer from a lack of resources.

The management of RSPCL does not presently view its role to be one of actually carrying out the operations of their plants, but one of promoting, enabling and regulating renewable

energy based projects. It is therefore expected that RSPCL will largely subcontract all operational responsibility, as planned for the Mathania Project. Subsequently, RSPCL envisages three possible options for the O&M of Mathania. Provided that the performance of the EPC/O&M Contractor is satisfactory, one option would be to simply extend the contract. A second option would be to bid for a new O&M Contractor, and the third would be for RSPCL to directly take over the O&M responsibility with their own personnel. At this point in time, RSPCL does want to keep the choice of options open. It will be on the basis of the actual experiences with the contractor and the overall development in the power sector that RSPCL makes the decision of which option to pursue. The risk associated with this proposed course of action is that political interference might prevent a decision which would be in the best interest of the project.

3.2 Organisation and management structure

The envisaged organisation and management structure will be detailed in the institutional development study which is to be commissioned soon. Pending the results of this study, the current plans are the following:

The Managing Director will be assisted by two staff units: one for business development, the other for secretarial support, possibly including a personal assistant to the Managing Director.

There will be two operational departments, one for Mathania, the other for the operations of the other plants. The main function of these operational departments will be in line with the general understanding of RSPCL's role - monitoring actual operations, which have been subcontracted out to third parties.

The operational department for Mathania will be located at the site and headed by an Executive Director. The personnel included in this department will be technically qualified and responsible for monitoring the activities of the EPC/O&M Contractor as well as the Replication Consultant. These professionals will be supported by administrative staff and a small administrative unit which will also handle the local financial affairs. Accounting and financial planning, budgeting, controlling and reporting will be mainly handled at the head office of RSPCL at Jaipur.

3.3 Personnel requirements and training

3.3.1 Personnel requirements

To successfully assume the role of promoter, developer and regulator, RSPCL will have to assemble a relatively small team of highly skilled and experienced professionals.

To attract and retain high calibre personnel, particularly at the location of Mathania (Jodhpur), RSPCL will have to offer their employees salaries, fringe benefits and working conditions which are in line with comparable employment opportunities in the private sector. According to the RSPCL management, the public sector nature of the enterprise will not prevent it from offering attractive terms and conditions of employment as exemptions from overly restrictive Government regulations can be obtained. Also such regulations can always be circumvented by hiring personnel on a contractual instead of on a standard public service basis.

3.3.2 Training

The professional personnel to be employed by RSPCL will have to possess basic professional qualifications. Depending upon the hierarchical position, substantial or a basic degree of experience in their respective fields will be required. At least some of the technical

staff should have experience with gasturbine and preferably even with combined cycle power stations.

None of the professional Indian staff, however, will have any experience with the ISCC technology used in the Mathania Project. It is therefore necessary to provide

- (i) technical training and practical experience on the design, operations and maintenance of the ISCC technology to RSPCL's engineers and technicians who will monitor Project implementation, operations and maintenance;
- (ii) training on the economics of ISCC power generation for the technical as well as for the financial and administrative personnel, and
- (iii) induction training, i.e. familiarisation with the general aspects of the ISCC concept to all professionals.

The manner in which these needs will be met is further discussed in Annex 11.

3.4 Finances

In the short and medium term, RSPCL is in a financially vulnerable situation as it depends completely on external financiers and hence has no buffer against unforeseen financial shortages.

RSPCL has prepared a financial forecast for the next 15 years, which considers only the operational results of the projects in the first development phase (see Appendix 1). Four main conclusions arise from this forecast:

- (i) The Mathania Project with a total investment of close to US\$ 250 million and an estimated net cash flow of around Rs 215 million (US\$ 5 million) will dominate and transform the financial situation of RSPCL. Ensuring secured financing will therefore be critical as RSPCL will have no financial reserves of its own. In comparison to Mathania, the wind energy projects generate only a negligible cash flow.
- (ii) Cash flow sensitivity to variations in either the plant load factor (PLF) or the tariff is extremely high. A 5% decrease in the plant load factor would push down net cash flows to nearly zero. Relatively small changes in operating costs can also dramatically affect cash flows. A 10% increase in costs would also set the net cash flow to zero. Of the operating costs, fuel accounts for the largest share. Efficient operations are therefore crucial for a financially viable RSPCL.
- (iii) RSPCL will only be profitable, if, as proposed by RSPCL management, the grant-financed portion of the investment is not included in the fixed assets and therefore not depreciated.
- (iv) With a debt service ratio of 1.2, the debt service capacity of RSPCL is marginal, further underlining how vulnerable the liquidity position of the company will be once Mathania starts operations.

To ensure sufficient liquidity, RSPCL will have to make arrangements not only for full payment of share capital by GoR but also for the availability of further equity infusions at relatively short notice. Additional borrowing should only be considered as a short term stopgap measure, as the company will not be able to service any more debt.

3.5 Summary evaluation and remaining risks

Given the fact that RSPCL will delegate most of the day-to-day operational responsibility for the Mathania Project to the EPC/O&M Contractor who, in turn, will have strong incentives to

operate efficiently, the institutional set-up carries relatively little risk, at least for the first five years. The three remaining risks can be summarised as follows:

Risk of political interference: There is considerable scope for political interference. The government of Rajasthan is and will be the sole shareholder of RSPCL. The governor of the State can intervene directly whenever he deems necessary. Yet given the current track record of the project, the risk that such interference will be used to the detriment of the Project, appears low. However, this assumption will require monitoring in the future, especially towards the end of the five-year operational period, when a decision has to be made of whether to extend the EPC/O&M contract or to opt for alternative arrangements. To reduce the risk of political interference in this decision, private sector presence on the Board of Directors should be increased.

Risk of insufficiently qualified personnel: The EPC/O&M contractor will have to be closely monitored to ensure that the project is implemented, run and maintained in the best long term interest of RSPCL. Even though support will be provided through consultants, RSPCL needs well qualified and experienced staff. Being a board-managed but nonetheless a Government-owned company, staffing policy is determined to some extent by public service rules and regulations, which may hinder the recruitment of the required qualified staff. Exemptions from Government regulations, salary levels, fringe benefits and general working conditions must therefore be carefully effected to ensure that the right people can be attracted and kept at RSPCL. Currently, the risk of RSPCL not being able to do so appears small but it needs to be monitored.

Risk of insufficient liquidity: The future financial situation of RSPCL will be tight. Relatively small changes in the plant load factor, the tariff, overall plant efficiency and/or the price of fuel could result in insufficient liquidity. As additional debt financing potential is limited, at least in the early years, RSPCL will have to obtain assurances from GoR that more equity will be made available when required.