

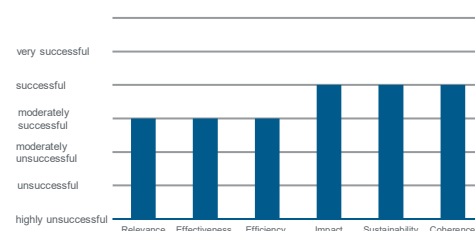
## Ex post evaluation IIFCL 1, India

<b>Title</b>	Environmental and Energy Investment Programme IIFCL I		
<b>Sector and CRS code</b>	Energy generation, renewable sources – multiple technologies (CRS: 23210)		
<b>Project number</b>	2007 65 057		
<b>Commissioned by</b>	Federal Ministry for Economic Cooperation and Development (BMZ)		
<b>Recipient/Project-executing agency</b>	India Infrastructure Finance Company Ltd. (IIFCL)		
<b>Project volume/ Financing instrument</b>	EUR 50 million		
<b>Project duration</b>	02/2010 (financing and loan agreement) – 04/2017 (final review)		
<b>Year of report</b>	2022	<b>Year of random sample</b>	2020

### Objectives and project outline

As part of the environmental and investment programme, a state-owned Indian non-banking financial company (NBFC) was supported in fulfilling its promotional mandate. The loan funds passed on via the executing agency were made available to project developers for the construction of plants for generating electricity from renewable energies. As part of the FC measure, sub-loans for two run-of-river power plants in the state of Himachal Pradesh and four solar power plants in Gujarat with a total capacity of 240.25MW were funded with a share of 20% each.

**Overall rating:  
moderately successful**



### Key findings

The project was effective in terms of development policy, but the effectiveness of the measure was rather low. The project was rated as being “moderately successful” for the following reasons:

- The relevance of the project is assessed as “moderately successful”. The project addressed the shortfall in financing for renewable energy plants in India at the time of project design. However, when designing the project, too little attention was paid to environmental aspects and the possibility of influencing the project implementation was low.
- The efficiency and effectiveness of the programme are “moderately successful”. The microeconomic efficiency of five of the six co-financed projects is good. The severe exception is the Sorang hydropower plant, which was damaged in 2015, and only went into operation in 2021. The outcome objectives set with regard to the development of the project-executing agency as a financial intermediary for renewable energy financing were only achieved in part.
- The overarching developmental impacts were “successful”. Overall, the project’s impacts can be rated as positive with regard to strengthening infrastructure financing in India. The provision of emission-free, renewable energy contributed to the positive development of the Indian electricity sector and the country’s positive economic development.
- The sustainability is also “successful”. Overall, it can be assumed that the project’s positive impacts will be permanent. The structural changes in the financing of energy infrastructure, the executing agency’s central role in this, and the now reliable operation of the power generation plants by established owners all suggest that the impacts of the measure will be sustained.

### Conclusions

- The FC measure contributed to the structural overcoming of the financial gap in the Indian electricity sector.
- However, the measure shows that the impact on the enforcement of environmental and social standards when co-financing through a financial intermediary is very low.
- In FC in particular, accompanying measures with young, emerging institutions should play a greater role, e.g., for the development of a qualified project pipeline, for environmental and social impact assessments and also for profitability assessments (due diligence).

## Evaluation according to DAC criteria

### Overall rating: 3

#### Ratings:

Relevance	3
Coherence	2
Effectiveness	3
Efficiency	3
Impact	2
Sustainability	2

In the period between the project appraisal in 2008 and the (planned) commissioning of the financed plants in 2012, the lack of power plant capacity coupled with increasing demand for electricity was the core problem of the Indian electricity sector. Structural problems in the financial and energy sectors meant that the increase in power generation capacity fell short of the growing economy's increasing demand for energy. Reports from the International Energy Agency (IEA) in 2007 and 2015 emphasised the underinvestment and the related poor quality of the electricity supply as the core problems of the Indian electricity market.<sup>1</sup> In 2010, the World Bank estimated that the shortage of energy was costing the country around seven percentage points of its gross domestic product annually.<sup>2</sup>

The main reason for the underinvestment was the chronic unprofitability of the Indian electricity sector. In 2005, the electricity price for end consumers only covered 85% of the utilities' supply costs.<sup>3</sup> Incoherent legal and commercial framework conditions, as well as the strong role of state-owned companies in the energy sector, were considered to be further causes of the underinvestment. With the liberalisation of the Indian electricity markets from 2003 onwards, the framework conditions for private investment in power plant capacities gradually improved, but the problems persisted at the time of the project appraisal in 2008.

At the time of the project appraisal, the Indian government had implemented various sector programmes for the expansion of power plant capacities, such as the Ultra-Mega Power Projects for power plants of over 4,000 MW each or the 50,000MW Hydro Initiative. With the launch of the Jawaharlal Nehru National Solar Mission (JNNSM) in January 2010, the Indian central government set itself the goal of building an additional 20GW of photovoltaic capacity by 2022. During the first phase of the mission, ending in March 2013, the government planned to build 1,000MW of grid-connected solar power plants.

In order to increase financing opportunities for investment projects, the Indian government has been implementing major financial market reforms since the 1990s. In the 2000s, numerous government activities aimed at closing the financing gap were applied to strengthen and establish state institutions and promote private-public partnerships (PPP).

Against this background, the overarching development objective of the programme was to contribute to socially and environmentally sustainable economic growth through the expansion of economic infrastructure, which is both technologically and economically effective (impact). The objective of the FC measure was to contribute to improving long-term financing opportunities for private and government infrastructure investments and to support the efficient and environmentally sustainable provision of energy (outcome). The project's impact chain is also plausible from today's perspective:

Credit line to IIFCL -> Implementation of renewable energy projects -> Expansion of renewable energy capacities -> More reliable electricity supply and attraction of further funds for more renewable energy

<sup>1</sup> IEA, World Energy Outlook 2007, China and India Insights: <https://www.iea.org/reports/world-energy-outlook-2007>

IEA, India Energy Outlook 2015: <https://www.iea.org/reports/india-energy-outlook-2015>

<sup>2</sup> World Bank 2010: India's Power Sector: <https://www.worldbank.org/en/news/feature/2010/04/19/india-power-sector>

<sup>3</sup> IEA, World Energy Outlook 2007, China and India Insights: <https://www.iea.org/reports/world-energy-outlook-2007>, p. 522ff.

projects -> Productive use of energy -> Higher economic growth and contribution to climate action by cutting CO<sub>2</sub> emissions.

The direct target group was domestic and foreign project developers from relevant sectors. Banks also benefited, as they were able to limit their own risk in large-scale projects through the participation of the project-executing agency, or were able to fund themselves in the long-term via the project-executing agency. The ultimate beneficiaries of the project are the respective users of the improved infrastructure; the entire population also benefited indirectly through climate and environmental impacts.

However, from today's perspective, the project design contains two significant weaknesses:

- Environmental protection aspects are given little consideration in the design, unlike in the formulation of the prominently emphasised impact objective. According to the project proposal, priority should be given to "projects using innovative technology". However, only one efficient coal-fired power plant (EUR 100 million) and medium-sized hydropower plants (EUR 80 million) are listed as possible individual projects in the project proposal. The market launch of new, CO<sub>2</sub>-free power generation technologies such as photovoltaics and wind power was subordinate in the project design. Government co-financing was particularly important at the time of the market ramp-up for renewable energy sources, as local private banks were often reluctant to invest in new technologies at the beginning.
- KfW was only involved to a minor extent in the risk assessment of the projects to be financed. The project proposal already assumes a lack of capacity on the part of the project-executing agency to carry out an in-depth risk assessment of the promotional projects. This would be the responsibility of the respective lead bank. By providing funds to a financial intermediary who itself does not have direct contact with the project developers, the possibility of influencing social and environmental aspects, for example, is low.

In summary, the project addresses a major problem in the Indian electricity market by supporting a government institution to leverage private capital expenditure in the energy sector, among other things. As a result, the project was closely embedded in the partner country's strategies. However, environmental aspects were only given little consideration in the project design. Due to the structure of the FC project, the possibility of readjusting during implementation of the energy generation projects was low.

**Relevance rating: 3**

### Coherence

The measure was embedded in the objectives of German and international cooperation with India and corresponded to the strategies pursued by the Indian partners. It targeted the "Promotion of efficient energy use" part of the energy sector concept of the Federal Ministry for Economic Cooperation and Development (BMZ).<sup>4</sup> Furthermore, the topic of energy was and still remains an agreed focus area of bilateral cooperation between India and Germany. The particular importance of the energy sector in bilateral development cooperation is underlined by the establishment of the Indo-German Energy Forum (IGEF) in 2006, two years before the project appraisal. One of the key sectors of the work of the Energy Forum is the promotion of investments in energy projects.<sup>5</sup> The project proposal for the present measure is based on the bilateral "Sector Reform Programme for Electricity 1" (BMZ 2001 65 298). There are links to various German DC projects, e.g. "Rehabilitation and construction of new hydropower plants" (PFC II: 2002 66 587) and "Promotion of private infrastructure projects via the financial sector" (PSIF II: 2001 66 883). Furthermore, the project is directly related to other FC measures to promote renewable energies in India; three of the co-financed solar power plants were co-financed in parallel by the Rural Electrification Corporation (REC) on a pro rata basis (BMZ no.: 2009 66 655, 2009 70 376)<sup>6</sup>.

In the latter half of the noughties, the Indian central government developed numerous activities to bridge the financial gap for infrastructure projects in the energy sector. These include the major reforms in the

<sup>4</sup> BMZ 2007: Sector concept: Sustainable energy for development, <https://www.bmz.de/de/mediathek/publikationen/reihen/strategiepa-piere/konzept145.pdf>

<sup>5</sup> IGEF project website of GIZ: <https://www.giz.de/en/worldwide/15850.html>

<sup>6</sup> Cf. Evaluations of these measures: [https://www.kfw-entwicklungsbank.de/PDF/Evaluierung/Ergebnisse-und-Publikationen/PDF-Dokumente-E-K/Indien\\_Energieeffizienz\\_2014\\_D.pdf](https://www.kfw-entwicklungsbank.de/PDF/Evaluierung/Ergebnisse-und-Publikationen/PDF-Dokumente-E-K/Indien_Energieeffizienz_2014_D.pdf)

energy sector, including the revised Electricity Act (2003) and the National Electricity Policy (2006). The establishment of Non-Banking Financial Companies (NBFC) also aimed to close the investment gaps in the energy sector by mobilising private capital. In addition, the central government and the Indian states also offered guaranteed off-take agreements for power generation plants in order to generate income security for the operators.

During the project implementation period, various international financial institutions co-financed the activities of the project-executing agency. The Asian Development Bank (ADB – “Indian Infrastructure Project Financing Facility”), the World Bank (“Financing Public Private Partnerships in Infrastructure”) as well as the Japan Bank for International Cooperation (JBIC). The annual reports on FC and TC with India repeatedly point to good cooperation with donors with sometimes overlapping commitments. However, donor coordination with respect to the project-executing agency proved to be challenging, for example with regard to environmental and social standards.<sup>7</sup> In summary, the project is to be regarded as largely coherent with the activities of German DC. In view of the external coherence, the project fits perfectly into the efforts of the partner government. The design and implementation of the programme appeared to have been coordinated with the activities of other donors.

**Coherence rating: 2**

**Effectiveness**

The objective of the project at outcome level was to contribute to improving the long-term financing opportunities for private and government infrastructure investments and to promote the effective and environmentally sustainable provision of energy.

Six power generation plants were financed, four photovoltaic plants in the state of Gujarat and two run-of-river power plants in Himachal Pradesh. The following map shows the approximate locations of the co-financed power plants.



	Locations of the two run-of-river power plants in the state of Himachal Pradesh (approximate)
	Locations of the four photovoltaic power plants in the state of Gujarat (approximate)

<sup>7</sup> Joint reporting on the DC programme for the promotion of renewable energy and energy efficiency in India (2014), internal document, p. 11.

The achievement of the indicators at the outcome level can be summarised as follows:

Indicator	Status PA, target PA	Ex post evaluation
(#1) The project-executing agency's average loan term is at least equal to the national average for infrastructure loans in the respective sub-sectors.	10-year average loan term, no target value specified.	Average loan term of the investments financed with the project according to the final review on average: 12 years.  The literature indicates current loan terms for solar farms in India of 17 to 18 years. <sup>8</sup>
(#2) The project-executing agency's loan commitments and disbursements for energy and environmental protection projects increase by at least 40% p.a.	Commitments: EUR 742 million (2007)  Disbursements: EUR 92 million (2008)	Commitments (2012): EUR 2.44 billion CAGR <sup>9</sup> 2007-2012: 30%  Disbursements (2012): EUR 1.1 billion CAGR 2008-2012: 89% (adjusted for inflation)
(#3) New: Annual generation of electricity by the financed power plants is no more than 10% below the theoretical yield data.	new indicator as part of the EPE Target value: maximum -10%	Electricity generation in the first 6–9 years of operation was on average 6% below the calculated target values. <sup>10</sup>

The achievement of the project's outcome objectives can only be estimated due to the lack of data. As part of the EPE, the project-executing agency of the FC measure did not provide any up-to-date operational data or facilitate access to the power plants.

(#1) In the final review of 2017, an extension of the project-executing agency's average term for infrastructure financing from 10 to 12 years is cited. More recent data is not available. The literature includes loan terms for solar farms in India of 17–18 years,<sup>11</sup> meaning that the project-executing agency's loan term does not correspond to the national average for infrastructure loans in the photovoltaic sector and the indicator is not achieved. However, the underlying assumptions for this assessment are highly hypothetical.

(#2) The project-executing agency's loan commitments are only reported for the energy sector; environmental protection projects were also not explicitly included in the portfolio at the time of the project proposal. Based on the status values in the project proposal, there was an average annual increase in cumulative loan commitments of 30% (CAGR) and in disbursements of 89% by 2012. With regard to the target value of 40% for loan commitments and disbursements, this indicator is not achieved; the target value is exceeded only in terms of disbursements.

<sup>8</sup> IEA/CEEW, Clean Energy Investment Trends 2021, <https://www.iea.org/reports/clean-energy-investment-trends-2021>, p. 29

<sup>9</sup> The CAGR expresses the compound annual growth rate, i.e. the mean annual growth rate in the period mentioned. Inflation-adjusted values are used for the calculation.

<sup>10</sup> Electricity generation data is available for three of the four financed photovoltaic plants for the first nine years of operation and one of the financed hydropower plants for the first six years of operation. Deviation modelled on the basis of the irradiation data for the locations of the photovoltaic systems (kWh/kWp) and the target values of the annual hydropower production of the power plant in question.

<sup>11</sup> IEA/CEEW, Clean Energy Investment Trends 2021, <https://www.iea.org/reports/clean-energy-investment-trends-2021>, p. 29

(#3) Annual electricity generation was introduced as an additional indicator as part of the EPE. This value is aimed at the physically measurable output of the measure, i.e. electricity generation. Based on publicly available data from the grid operators, it was possible to track the yield data of four of the six funded power plants. A comparison with the irradiation data and the theoretically calculated target values shows that the energy yield is on average 6% below the theoretical values and thus within the tolerance range of common deviations. As a result, this indicator was achieved.

The severe problems in the construction of the Sorang hydropower plant (100MW) in the state of Himachal Pradesh are particularly noteworthy. After a few delays in commissioning in 2015, there was an accident in an improperly constructed pressure pipe. The escaped water masses flooded the nearby village of Sorang and led to the loss of at least three lives. According to Internet reports, the villagers had previously complained to the authorities about a leak in the pressure line.<sup>12</sup> Following changes of ownership and extensive construction measures, both blocks of the power plant were commissioned on 21. and 23. September 2021.<sup>13</sup>

Liquidations were also carried out on three of the four financed photovoltaic systems, as two of the project developers had to file for insolvency. Established investors are continuing to operate the affected plants. The extent to which commercial banks were compensated from the insolvencies is not known. However, it can be assumed that they had to accept losses.

Overall, it was possible to meet the outcome indicators of the measure in part, but this assessment is based on a wide range of assumptions and secondary sources. However, the accident at the Sorang hydropower plant and the insolvencies of various project developers indicate shortcomings in the effectiveness of the measure.

**Effectiveness rating: 3**

## Efficiency

The total costs of the measure have decreased significantly compared to the programme proposal. While the programme proposal envisaged composite financing of EUR 180 million and total costs of EUR 2.27 billion due to high bank and counterpart contributions, a loan agreement of EUR 50 million was ultimately concluded in February 2010, while the total costs fell to EUR 250 million at the same time. This reduced the leverage of FC funds from 1:12 to 1:5. In the final review this is based on the project-executing agency's restricted project pipeline, as well as on the specified financing share of max. 20% of project costs. Another reason for the reduced financial requirement is likely to be the discontinuation of the financing provided for in the project proposal with a contribution of EUR 100 million for the Krishnapatnam supercritical coal-fired power plant. This was financed with substantial contributions from another KfW project (Sector reform programme for electricity 1 – Andhra Pradesh, BMZ number 2001 66 298).

Estimates of the unit costs of the plants are only superficially possible on the basis of the available data. A total capacity of 240.25MW was installed (29% photovoltaics, 71% hydropower). In view of the total costs of EUR 250 million, the installation costs amount to around EUR 1.04 million per MW. In view of the typical costs for larger photovoltaic open-air plants in 2012 of EUR 1.5 million per MW in Germany<sup>14</sup> and EUR 1.6 million per MW in India<sup>15</sup> as well as the international price levels for larger run-of-river power plants, this is quite plausible. The accident at Sorang hydropower plant and the subsequent compensation and construction measures significantly impair the cost efficiency of the measure, but the additional costs cannot be quantified due to the insolvency of the project company and resale of the project.

For the financed photovoltaic systems, the amounts of energy fed into the grid are remunerated in accordance with the feed-in tariff applicable in Gujarat in 2012 of INR 15/kWh (EUR 0.21/kWh 2012) for the first

<sup>12</sup> SANDRP 2015, Sorang Hydropower disaster: Will we learn any lessons? <https://sandrp.in/2015/11/22/sorang-hydropower-disaster-will-we-learn-any-lessons/>

<sup>13</sup> Central Electricity Authority, Quarterly Review July - September 2021: [https://cea.nic.in/wp-content/uploads/hpm/2021/11/QPR\\_106\\_9th\\_NOV\\_.pdf](https://cea.nic.in/wp-content/uploads/hpm/2021/11/QPR_106_9th_NOV_.pdf)

<sup>14</sup> Photon Consulting. 2012. Market price and volume data. 2012.

<sup>15</sup> KfW Development Bank, Ex post evaluation of Sakri solar power plant, [https://www.kfw-entwicklungsbank.de/PDF/Evaluierung/Ergebnisse-und-Publikationen/PDF-Dokumente-E-K/Indien\\_Sakri\\_2020\\_D.pdf](https://www.kfw-entwicklungsbank.de/PDF/Evaluierung/Ergebnisse-und-Publikationen/PDF-Dokumente-E-K/Indien_Sakri_2020_D.pdf)

twelve years of operation and INR 5/kWh (EUR 0.07/kWh) for another 13 years. In view of calculated electricity production costs of approx. 0.013 EUR/kWh, the feed-in tariff is quite high; the economic pay-back is likely to be achieved in far less than ten years. The financed hydropower plants in the state of Himachal Pradesh are remunerated using a cost-plus approach with a 35-year power off-take agreement. Hydropower plants are also exempt from tendering procedures in accordance with the National Tariff Policy of 2016. Based on the estimated values for the plant costs and the remuneration amount for the financed power plants, very profitable operation can be assumed.

The microeconomic efficiency of the measure can therefore be rated as positive (again, with the exception of the Sorang hydropower plant). In view of the amount of power generated, the project's macroeconomic efficiency on the other hand is rather low; this is mainly due to the high feed-in tariffs in contrast to the estimated generation costs for the plants.

**Efficiency rating: 3**

**Impact**

According to the impact objective, the measure was intended to contribute to technologically and economically efficient economic growth through the expansion of economic infrastructure, as well as socially and environmentally sustainable economic growth. Target achievement at the impact level is summarised in the table below:

Indicator	Status PA, target PA	Ex post evaluation
(#1) Increasing investment volume for renewable energies, energy efficiency and climate action measures.	n/a	Investments in renewable energy plants in India <sup>16</sup> :  2008: USD 3.2 billion p.a. 2011: USD 6.4 billion 2018: USD 11 billion
(#2) The energy and peak load deficits remain below the current level on a national average with a growing economy.	Energy deficit: -10% Peak load deficit: -14%	Projection for the 2021/22 fiscal year <sup>17</sup> : Excess energy: +6.4% Peak load surplus: +8.2%
(#3) The individual projects co-financed under the measure save at least 0.3 million tonnes of CO <sub>2</sub> per annum (lowered target value).	Adjustment of the target indicator upon conclusion of the reduced financing and loan agreement.	Emission savings: 0.59 million tonnes CO <sub>2</sub> p.a.

In terms of developmental impact, the project initially contributed to strengthening the financial intermediary. The project-executing agency's credit rating was enhanced through cooperation with international financial institutions, which facilitated the inclusion of long-term funding lines.<sup>18</sup> International best practices for infrastructure financing were also exchanged.

<sup>16</sup> Frankfurt School et al., Global Trends in Renewable Energy Investment: <https://www.fs-unep-centre.org/global-trends-in-renewable-energy-investment-2020/>

<sup>17</sup> Central Electricity Authority 2021, Load Generation Balance Report 2021-22: [https://cea.nic.in/wp-content/uploads/l\\_g\\_b\\_r\\_reports/2020/LGBR\\_2021\\_22.pdf](https://cea.nic.in/wp-content/uploads/l_g_b_r_reports/2020/LGBR_2021_22.pdf), p. 8.

<sup>18</sup> IIFCL, Annual Report 2018–19, page 17.



Since it was founded in 2006, the project-executing agency has become a key player in infrastructure financing in India. Overall, the project-executing agency was involved in financing 17% of India's electricity generation capacities over the past 15 years. Public-private partnership approaches to leveraging private investments are considered to be very successful in the Indian energy sector. Overall, the share of private investments in the Indian electricity sector was between 0 and 13% between 1992 and 2005.<sup>19</sup> The share of private investments in power generation systems in particular grew to around 35% in 2014.<sup>20</sup> In 2019, more than 50% of investments in the energy sector were attributable to private donors.<sup>21</sup>

In connection with this, it has been possible to close the investment gap in the energy sector in recent years. The renewable energy sector in particular has recorded dynamic growth in India over the past decade, which is also reflected in the increasing investment volumes (see Impact Indicator #1). Despite falling unit costs, particularly for photovoltaic and wind power plants in the same period, the investment volume grew by around EUR 3 billion (2008) to around EUR 11 billion (2018). In addition, the energy and peak load deficit (#2) turned into an energy and capacity surplus in the Indian power system. Although these developments cannot be directly attributed to the effects of the measure, it likely contributed to them.

The project will be able to achieve estimated emission savings (#3) of 0.59 million tonnes of CO<sub>2</sub> per year. Savings are greater than those indicated when the target indicator was adjusted during project implementation. The impact indicator in question can therefore be considered achieved.

The project's impacts can be rated as positive with a view to strengthening the implementing agency and thus infrastructure financing in India. The provision of emission-free, renewable energy not only contributed to the positive development of the Indian electricity sector, but also to the country's positive economic development. However, the accident at the Sorang hydropower plant weakens the developmental impact of the project, as there were adverse impacts (including deaths) on local residents and acceptance of hydropower projects in India decreased due to various events of this type.<sup>22</sup>

### Impact rating: 2

### Sustainability

The project-executing agency continues to be perceived by the Indian government as strategically important and it provides a guarantee for 50.8% of the long-term credit lines. Furthermore, the agency is regularly provided with substantial funds from the government budget. Successful measures have also been implemented in recent years with the Asian Development Bank (ADB) and other multilateral financial institutions.<sup>23</sup> Discussions are currently under way to develop the project-executing agency into an Indian development bank.<sup>24</sup> Overall, the project-executing agency's performance is improving; after operating losses in 2019, a profit is reported for the 2020 and 2021 fiscal years.<sup>25</sup>

Based on the information available, the continued operation of the power generation plants financed with the involvement of the FC measure can be regarded as stable due to the current ownership structure. Three of the financed photovoltaic plants have been sold to an Australian investment house; another plant is owned by an established Indian conglomerate in the renewable energy sector. Random visual plant inspections from outside the company premises of three photovoltaic plants as part of the EPE suggest that they are in good condition visually. However, no operating data was provided by the executing agency. The publicly available yield data and the high feed-in tariff indicate the microeconomic stability of plant operations.

<sup>19</sup> IEA, World Energy Outlook 2007: <https://www.iea.org/reports/world-energy-outlook-2007>, p. 527.

<sup>20</sup> IEA, India Energy Outlook 2015: <https://www.iea.org/reports/india-energy-outlook-2015>, p. 50.

<sup>21</sup> IEA, India Energy Outlook 2021: <https://www.iea.org/reports/india-energy-outlook-2021>, p. 193.

<sup>22</sup> SANDRP 2015, Sorang Hydropower disaster: Will we learn any lessons? <https://sandrp.in/2015/11/22/sorang-hydropower-disaster-will-we-learn-any-lessons/>

<sup>23</sup> ADB, IIFCL Guarantee Facility: <https://www.adb.org/sites/default/files/project-documents/43932/43932-014-xarr-en.pdf>.

<sup>24</sup> Times of India, New DFI management to take a call on IIFCL merger: [http://timesofindia.indiatimes.com/articleshow/85550934.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cpps1](http://timesofindia.indiatimes.com/articleshow/85550934.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cpps1).

<sup>25</sup> IIFCL, Financial Results: <https://iifcl.in/financial-results>



The owner and operator of the two co-financed hydropower plants is one of India's leading renewable energy companies. The commissioning of the damaged Sorang power plant in September 2021 and the good earnings figures are positive indicators of the quality of the operational management of the hydropower plants. However, these assessments of sustainability are challenging in the context of a remote evaluation.

Overall, it can be assumed that the project's positive impacts will be permanent. The structural changes in the financing of energy infrastructure, the executing agency's central role in this, and the now reliable operation of the power generation plants by established owners all suggest that the impacts of the measure will be sustained.

**Sustainability rating: 2**

### Notes on the methods used to evaluate project success (project rating)

Projects (and programmes) are evaluated on a six-point scale, the criteria being **relevance, coherence, effectiveness, efficiency, impact and sustainability**. The ratings are also used to arrive at a **final assessment** of a project's development effectiveness. The scale is as follows:

<b>Level 1</b>	very successful: result that clearly exceeds expectations
<b>Level 2</b>	successful: fully in line with expectations and without any significant shortcomings
<b>Level 3</b>	moderately successful: project falls short of expectations but the positive results dominate
<b>Level 4</b>	moderately unsuccessful: significantly below expectations, with negative results dominating despite discernible positive results.
<b>Level 5</b>	unsuccessful: despite some positive partial results, the negative results clearly dominate
<b>Level 6</b>	highly unsuccessful: the project has no impact or the situation has actually deteriorated

Rating levels 1-3 denote a positive assessment or successful project while rating levels 4-6 denote a negative assessment.

The **overall rating** on the six-point scale is compiled from a weighting of all six individual criteria as appropriate to the project in question. Rating levels 1–3 of the overall rating denote a “successful” project while rating levels 4–6 denote an “unsuccessful” project. It should be noted that a project can generally be considered developmentally “successful” only if the achievement of the project objective (“effectiveness”), the impact on the development objective (“impact”) **and** the sustainability are rated at least “moderately successful” (level 3).