



## **Comments on Asian Development Bank’s (ADB’s) Draft Reports on its “Pre-feasibility Study (Pre-FS) on the potential for Energy Transition Mechanism (ETM) Opportunities in Pakistan”**

These comments are submitted on behalf of the Alliance for Climate Justice and Clean Energy (ACJCE) in response to the circulation of the following draft outputs and documents by the ADB:

1. *Review of the Power Sector’s Policy and Regulatory Environment*
2. *High-level screening using a Multi-Criteria Analysis (MCA) Framework for Pakistan*
3. *Pre-FS Final Inception report*
4. *Comment matrices detailing ADB’s responses to CSO concerns raised in previous consultations and in various written submissions on Pre-FS for the ETM.*

The ADB ETM team and consultants has invited input – particularly on the draft reports 1 & 2 above. Our note outlines ACJCE’s feedback about these items. We also offer our broader observations about the pre-FS design and the consultative process as whole. At a general level, the ADB’s approach to the pre-FS (as displayed in these reports) reveals a disappointing failure to incorporate the principles of climate justice and just energy transitions into the analytic framing of the pre-FS as well as the design of the consultation process. At present, the pre-FS design remains tied to a narrow and rigid Business-as-usual approach to the energy transition that fails to reckon with the intricate realities of climate change effects, the inter-related and cross systems nature of socio-ecological damages associated with fossil fuel based systems, and the demands of a just and inclusive transition. The pre-FS ultimately misreads the challenges associated with effective climate adaptive action through an ETM. This failure is most evident in the flawed assumptions guiding the MCA framework and inadequacies in the study’s scope, design, and timelines. In its present shape, the pre-FS design is likely to misprioritize plants and misallocate resources resulting in ineffective, sub-optimal or even counter productive outcomes, as detailed below.

### **A. Failures in the Consultation Process:**

1. At our initial consultation we had requested an exercise in collectively designing the guidelines and principles of engagement for grounding the consultation process. This was requested to ensure a robust framework that reflected fair inclusivity and meaningful incorporation of stakeholder input at every stage. In particular we emphasized the need for the design of the Pre-FS to reflect mutual agreements between stakeholder communities/ CSO’s and the ADB – particularly in respect of the following elements:
  - (i) the study’s TOR’s and scope
  - (ii) its data requirements
  - (ii) its protocols for data transparency



- (iv) the study's methodology and analytic criteria,
- (v) its review of existing literature and research on environmental assessments and just transition principles in the local and global context, and
- (v) the accountability mechanisms for meaningful incorporation of CSO concerns.

ADB on the other hand has sidestepped this crucial task and proceeded with defining a mode of engagement that is not based on dialogue or mutual agreement. In this framework, actual input and feedback is prevented from materially influencing outcomes by conveniently disregarding it as beyond the “agreed scope, TOR’s and timelines” of the project. Here is an example of how our input and perspective is sidelined by resort to this method of silencing on ADB’s part:

“Based on the two stakeholder consultations held to date (i.e., with relevant GOP entities and with Pakistan’s CSO community), ADB is devising a separate overall ETM stakeholder engagement plan for Pakistan to clarify the overall medium-to-long-term trajectory, objectives, and timeline of ETM and Just Transition. Our team will continue engaging on any matters that are relevant (and can be addressed) within the agreed scope, TORs and timeline for the ETM Pre-FS, which is an initial scoping exercise...”

The question regarding this “agreed scope, TOR’s and timelines” which must be raised and addressed is this: Agreed by whom? We have conveyed serious reservations about the scope of this study (some of which we reiterate and outline below as well). The ADB’s response to our concerns with this scoping invariably revolves around the assertion that “[this] goes beyond the scope of the pre-FS” without any attempt to engage with the substance of the suggestion or reason through what the scope ought to be and why it ought to be such. This suggests that the said “scope and TOR’s” have already been predetermined and imposed a priori by ADB management unilaterally, rather than opened up to meaningful dialogue and mutual determination. Under such conditions of engagement, the consultative process can hardly be seen as mutual, sincere, or meaningful dialogue. It becomes instead, an exercise in futility and mere formality with the process more or less arranged to ensure a predefined and predetermined outcome.

2. Our above objection is fortified by evidence of an equally disingenuous timeline and process re: budgeting and scope of the exercise. The draft policy review states for instance that

“To facilitate the ETM -related exploratory work in Pakistan, ADB allocated some resources under the approved July 2022 transaction technical assistance facility (TA) on behalf of the Islamic Republic of Pakistan. The allocated TA budget will be used to support the conduct of a Pre-FS.”



This admission begs the question: Are the principles of just transition and climate justice shaping the scope and TOR's of the pre-FS and the necessary resource allocation for the exercise, or are arbitrary bureaucratic decisions by the ADB on budgets and other priorities constraining the scope and design of the pre-FS? If it is the latter (as the quote suggests), the entire consultative process is questionable as a mere formality and exercise in ticking off check boxes to garner legitimacy for an inherently unjust, non-consultative, and one-sided process. These are the very same BAU priorities and practices that have led to a global consensus on the need for serious institutional reforms within MDB's. We remind the ADB of this consensus expressed in the COP 27 text which "calls on the shareholders of multilateral development banks and international financial institutions to reform multilateral development bank practices and priorities." In principle, when it comes to climate adaptive action, resources ought to be allocated in keeping with the on ground empirical needs of the project rather than pre fixed bureaucratic choices and institutional priorities that are non-transparent in their nature.

3. The ADB's refusal to entertain our request for a mutually developed framework for stakeholder consultation and relevant policy principles and guidelines, reflects bad faith on the part of the Bank. Numerous organizations are guided by such principles of engagement which are necessary for protecting against arbitrary action, disingenuous engagement, exploitation of communities and CSO's for rubber stamping and to confer legitimacy on the Bank's inherently unjust operations, ticking off task lists for expediency, and basic abuse of position in important projects with potentially deep and lasting impacts on climate vulnerable communities. By way of illustration, the WBG have developed extensive consultation guidelines for grounding the consultative exercise. ADB on the other hand, either lacks such a framework or has refused to share it, refer to it, or implement it if it exists. It has further refused to even avail of the offer to help prepare such a framework in consultation with those affected communities and CSO's groups that are some of the most significant stakeholders in the ETM process.
4. The exclusion of actual on-ground affectees from the data collection and criteria development process for the Pre-FS is extremely concerning. What this implies is that one may conduct a study meant to prioritize climate action and identify socially and ecologically destructive fuel plants for retirement, without actually considering what the imperatives of climate justice imply for local populations or what social and ecological destruction mean for the communities that bear those losses. The exercise ends up excluding – in fact silencing – the very voices that are the principal stakeholders (and whose suffering the eventual ETM is intended to alleviate). ADB's response to our concerns with this exclusion of local communities is as follows:

“This point was discussed in the meeting, and it was explained that the identification and consultation of any affected communities will come at a much later stage, typically, during the conduct of the full feasibility study of any assets selected for



further ETM related due diligence as a result of the ETM Pre-FS, which is only a scoping exercise limited to CFPPs and other HCPPs at this stage—no specific site identified so hard to know which community to speak to at this stage.”

As an initial scoping exercise only, the ETM Pre-FS will not result in any projects being short-listed or selected, nor in clearly identified and/or de facto affected communities that would merit issuing (draft) Pre-FS outputs in local languages at this stage.... a further analysis of any (legacy) issues / concerns / grievances (as well as any estimated costs to address those) would only be merited for those ranked CFPPs and/or HCPPs that are subsequently selected for the conduct of a full study to assess the feasibility of their suitability for early retirement and replacement by newly installed renewable capacity. Only at that time, the de facto affected communities would be identified and consulted on any prevailing issues /concerns / grievances to be further investigated / addressed as part of any potential future ETM related work.”

There are several reasons why this answer is not only inadequate, but dangerously misguided and based either on a deliberate disregard of the principles of climate justice, just transitions, and adaptation or a flawed conception of their meaning. First, the ostensible argument of “not knowing who to speak to on the ground” is a red herring. The argument assumes that the only relevant affectees and local communities for this exercise are those impacted by job losses in the localities of the specific projects to be retired. It therefore exudes from its purvey, those communities who are the principal affectees of climate change – which is a non-site specific, regional, system wide, and cross-population pathology wrought by reckless anthropogenic activities, in which practices ADB has been historically complicit (case in point: Chashma Right Bank Canal (CRBC) and Jamshoro Coal Plant). By extension, the affectees of climate change are a varied and demographically diverse group. Given that the ETM is an exercise in climate adaptation meant to respond to the losses and needs of the climate vulnerable, it is these affectees who are the primary and necessary stakeholders with the most significant interest in the conceptualization, design, and implementation of both the study and eventual plan. Their perspective is therefore significant as a ground for imagining the ETM pre-FS in a just and inclusive manner and/or reasoning through different study and project designs. In short, they ought to be the rightful socio-moral criteria for evaluating the effectiveness and responsiveness of the ETM.

Secondly, even if we restrict our sample population to site-specific communities, the suggestion that one cannot know which ones to target is patently false. It is for instance, widely recognized and thoroughly well documented that Sahiwal and Thar coal plants are established polluters comprising massive emissions hotspots with socially disastrous impacts. The latter cluster of coal projects are in fact classed as one of the biggest CO<sub>2</sub> hotspots in South Asia. The site-specific communities impacted by such projects are certainly identifiable and their perspectives accessible and relevant to the inception and framing of the study at the earliest of stages.



The argument that the incorporation of local perspectives is better reserved for a later stage in the ETM process is also a strange and unwarranted position given that effective climate adaptive action depend very heavily on the knowledge practices and buy-ins of traditional communities. In fact, meaningful and impactful consultation through the centering of affectees and local perspectives is a necessary propaedeutic for ensuring that the eventual design of the study benefits from local knowledge and experience. An effective design would also incorporate and channel the adaptive and climate resilient wisdom embedded in historical local practices. These influences are even more relevant at the inception stage in the pre-feasibility study as it is here that the intellectual groundwork is laid for the ETM process as a whole. The point is emphatically re-stated: Indigenous and local knowledge, culture, experience, testimony, values and practices must inform a Pre-FS study in respect of its a) TOR's, b) intellectual approach, c) determination of data needs, d) reviews and incorporation of relevant research, e) methodological and analytic parameters, f) scope of study, g) assessment of necessary resource allocation needs, h) timelines, relevant primary and secondary sources of information, (i) the step-by-step sequencing of tasks through which such a report is produced, (j) the criteria and mechanisms through which the study's final shape may be assessed for its successful addressal of the problem at hand.

5. The ADB's own Safeguard Policy principles require it to "prepare an Indigenous Peoples plan (IPP) that is based on the social impact assessment with the assistance of qualified and experienced experts and that draw on indigenous knowledge and participation by the affected Indigenous Peoples communities" and to include a "framework for continued consultation with the affected Indigenous Peoples and communities" in the course of the Bank's various operations. What has been requested of the ADB in relation to the study's scope and design and the consultation process is nothing more than a concrete method for giving effect to these principles. The Bank's chosen mode of operation therefore contravenes the spirit of its own safeguard policies.
6. In relation to the above noted concern in (3), There is a clear indication of bad faith on ADB's part which is reflected in the following exchange between a member of the Alliance and the ADB representative expert during the consultation meeting on 19th Dec.

ACJCE: "what you [ADB] are suggesting re:communities is alarming: From our perspective, impacted or potentially impacted communities are precisely the most significant voices to the process and precisely at the earliest possible stage (inception). Centering those voices is absolutely important -- the principles of climate justice and just transitions require as much.

ADB: We agree entirely. ADB considers meaningful consultation with affected communities a core element of its project design and implementation approach. And in the context of a just transition, this is even more relevant.



Despite this acknowledgment, the Bank then goes on to exclude the input actually provided by such communities, while ousting their perspective from the project design phase of the process (details as laid out in (3)). One is left to wonder if this extolling of “meaningful consultation” is an actual value espoused by the Bank or duplicitous lip service to a merely rhetorical ideal.

## **B. Limitations in the ADB’s account of the Power Sector’s Policy and Regulatory Environment.**

1. The policy overview omits any account or analysis of perhaps the most relevant and significant aspect of the Legal, Policy, and Regulatory Framework for the Pakistan’s energy sector – namely, the constitution, and the role of the Council of Common Interests (CCI) which is the designated policy making, supervising, and regulatory body thereunder. This omission is significant because it runs the risk of misconstruing the institutional framework as well as the political context, rationale, goals and objectives of Pakistan’s homegrown plans for an intended energy transition. For instance, while the IGCEP is indeed a roadmap detailing the nation’s energy transition, it is only one of several possible policy roadmaps given the constitutional space for decentralized approaches to energy with planning undertaken separately by provincial units. Moreover, as a policy planning document, the IGCEP is subject to the approval of the regulator in line with the principles of least-cost and environmental sustainability as enshrined in CCI mandated policies and criteria. These include the National Electricity Policy 2021 (NEP), the Alternative Renewable Energy Policy 2019 (ARE), and the National Electric Vehicles (NEV) policy, amongst others. The regulator, NEPRA, is itself subject to such policies and criteria – as detailed in the regulator’s parent act i.e. the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (NEPRA Act). While the former policies provide specific priorities and targets for the displacement of fossil fuel sources and the integration of renewables, the latter parent statute obligates the regulator “to make special provisions for development of renewable electricity markets in accordance with the international commitments of the Islamic Republic of Pakistan as well as the responsibility of the Islamic Republic of Pakistan to support and encourage measures to effectively mitigate adverse climate change and to effectively manage conflict of interest of the State in relation to development of the electric power markets.” The regulatory framework therefore not only binds the regulator and its licensees such as NTDC to specific values and goals viz climate action and conflict managements, but also subjects its activities to the supervision of the CCI within which inter-provincial consensus is a necessary principle of process and practice. Although the draft study makes some reference to the “challenges with inter-provincial consensus” and attempts to include some discussion of the different provincial power policies being enacted, the analysis on the conflicts and interplays between the different energy policies, institutional players, values, and local and global commitments is surface level at best. The experience of significant inter-provincial conflict



in the previous IGCEP and in the case of the Government of Pakistan's present solar project plans demonstrates the dangers of omitting a thorough attention to this principle of process. It bears noting, for instance, that the hydro-heavy focus of the IGCEP does not enjoy inter-provincial consensus. Similarly, the mechanisms for meeting the land requirement for transmission expansion and RE projects have also run up against roadblocks in recent times.

The draft study is particularly weak in its attempt to recognize the ecological significance and technical implications of these regulatory factors. These include but are not limited to

- (i) disputes around water and the impact of mega hydro projects on the health of the Indus river delta for lower riparian provinces
- (ii) conflicts around just land acquisition for RE projects
- (iii) complexities arising from the parallel IGCEP for Karachi Electric (KE)
- (iv) ambiguities in roles emerging from the recent announcement of a parallel Sindh electric power regulatory authority, and
- (v) disagreements around the development of gas infrastructure and the pricing and viability of Gas as an energy source
- (vi) Differential in the provincial ownership and control of various energy resources
- (vii) Differential in the provincial vulnerability to climate effects and its implications for issues of inter-provincial equity.

These are all missing in the present analysis. Absent a cogent study of these factors, any just transition plan is likely to run into unmanageable obstacles.

2. For similar reasons however, there are also significant opportunities for synergistic thinking around energy transition that the ADB has missed. For instance, while the majority of coal and gas infrastructure projects are located in Sindh, the province is also home to some of the most promising prospects for Wind and Solar development. A coordinated and integrated ETM plan that incentivizes the shift from investments in fossil fuels to renewables without compromising long term local and provincial interests is thus easily possible by taking a more decentralized approach to the task. Similarly, nurturing energy cooperatives and other community led models are an equally effective method for incentivizing renewables through micro-grid solutions that could cater to systems security needs in various localities countering any need to persist with conventional fossil fuel plants. In short, any pre-FS study must recognize and contend with legal and regulatory nuances involving the distribution and potential of local, regional, and provincial energy resources as well as matters of inter-provincial equity and ecological risks to develop an optimal plan.
3. The report purports to provide a "high-level review of the current policies, regulations and contractual arrangements in place." The draft notes that "impact on individual power plants will vary, depending on the contractual and regulatory frameworks they were built under, as these frameworks have changed over time." The report also recommends various policy



goals to be included in the existing or new policies to help facilitate Pakistan's envisaged energy transition. However, it is curious that despite claiming to conduct a "high level review" of the relevant contractual arrangements with HCPP's and CFPP's, both the said report, as well as the MCA screening report include absolutely no data or analysis of specific contracts (PPA's, IA's, Lease Agreements, Tariff determinations etc.) of any of CFPP's. The report has instead remained content with a cursory discussion of the various power policies – here too without any critical diagnostic analysis of the reasons for their historic failure, or the role of the relevant economic paradigms, development finance infrastructures, and market mechanisms in precipitating these failings. A proper review of the regulatory framework requires a more comprehensive and cogent account of the historical structures, their underlying context and rationales, their strengths and limitations, and their future directions. This is essential if an exercise in mapping regulatory frameworks is actually intended to meaningfully contribute to designing a successful ETM. But more importantly, it requires hard data on specific PPA's and related documents so that a more

4. The report utterly fails to undertake any meaningful analysis of the hydropower question in its account of Pakistan's energy sector and the global policy context. As repeatedly noted by members of the coalition at the 19th December consultative meeting, ADB's approach to hydropower and its putative status as a renewable resource requires both clarification and revision. The ADB has stated its stance on the topic as follows:

Although replacement capacity from small / medium (run-of-the river) hydro power projects would be preferable, (large) hydropower may also be considered as a renewable energy source for ETM Pre-FS purposes.

We had voiced serious concerns with this assumption that hydropower may legitimately be considered as a renewable, environmentally friendly, or neutral source. The view is simply unmerited and contradicted by an overwhelming body of scientific evidence. It is also inconsistent not only with global climate sustainability goals and Paris principles but also with Pakistan's local policy planning of a just energy transition. When framing a study meant to guide an undertaking as complex and multifaceted as a national level energy transition mechanism, due regard must be paid to the integrated nature of climate mitigation and adaptive action within the context of just transition needs viewed holistically and contextually. The COP 27 decision text for instance recognizes the "critical role of protecting, conserving and restoring water systems and water-related ecosystems in delivering climate adaptation benefits and co-benefits, while ensuring social and environmental safeguards." The same text, speaks of the need for a "comprehensive and synergetic" approach to tackling the "interlinked global crises of climate change and biodiversity loss" and the "vital importance of protecting, conserving, restoring and sustainably using nature and ecosystems for effective and sustainable climate action." The COP 27 text goes on to stress the "importance of protecting, conserving and restoring water and water related ecosystems, including river basins, aquifers and lakes" and urges the



“further integration of water into adaptation efforts.” Pakistan’s own regulatory regime treats hydropower as a non-renewable source with the ARE excluding it from the purvey of renewables and indicating the development of a separate policy for hydro. Given this national and global policy context, it is concerning that ADB is yet to present a comprehensive evidence based and context sensitive approach to the question. In fact, when pressed on the matter, the answer from the Bank has been characteristically avoidant:

“Although the question seems merited, it goes beyond the scope of the ETM Pre-FS and would be part of any potential future ETM-related work.”

This failure to confront the ground realities around hydropower or rather the deliberate avoidance of the issue can have serious implications for the sustainability and effectiveness of the ETM and for climate adaptive action within the context of Pakistan’s unique ecology. These implications are further outlined in Section B (4).

5. There is a similar pernicious omission in the pre-FS draft studies – namely the unfortunate and misguided choice to exclude Gas plants from the scope of the ETM. The Bank has outlined its stance on Gas in the following words:

“As an affordable and reliable energy source that is cleaner/less polluting compared to coal, gas is indeed considered a transition fuel that can help (developing) countries in moving away gradually from their high dependency on heavy fossil fuel generation to renewables. For example, the accelerated conversion of a coal or RFO power plant could provide an interim solution to help reduce GHG emissions in the short-term. To be clear, however, any projects involving the conversion to gas are not considered since the ETM program requires that the replacement capacity for any early retired CFPPs or HCPPs needs to come from (newly installed) renewable capacity only.”

This stance on Gas is both umerited and dangerous. The exclusion of gas and RLNG run power plants from the considerations of the ETM mechanism by the ADB is arbitrary, unscientific, and structurally flawed. First, it maintains a distinction between gas-powered plants and other fossil fuel-based projects which is not warranted by the ARE Policy 2019. Second, it flies in the face of global consensus on the environmental harms associated with gas projects. What was required on ADB’s part was a careful analysis of whether Pakistan’s regulatory regime and international best standards on the definition of fossil fuels warranted this exclusion of Gas or not.

6. The demand and supply analysis in the draft report reflects a flawed and superficial approach to the intrinsically intertwined relationship between renewables integration, fossil fuel displacement, and system and generation planning. Attention to this interplay is a necessary precondition for any effective conceptualization of a just and effective ETM. In our 19th



December consultation meeting, every CSO present had repeatedly called attention to the need for an integrated and holistic approach to planning the ETM. In particular, we stressed the need for an integrated approach to the selection of fossil fuel plants for early retirement or constrained dispatch with a plan for incentivizing a re-direction of investments into renewables conducted within the context of transmission challenges and future system upgrades. This integrated assessment is necessary to determine both the market forces and the system needs and replacement possibilities for displaced or accelerated retirements of HCPP's and CFPP's. For instance, the present analysis does not even fully factor the TSEP plan into its assessment of system security futures and its assumptions based on existing IGCEP inputs. This has resulted in an impoverished and inaccurate understanding of the long term outlook and poor balancing of system security needs with the financial viability assessment of possible buyouts. This error is most evident in the absence of location specific analysis of plants in the MCA assessment. Oftentimes, it is transmission constraints that make a fossil fuel plant appear valuable for system reliability needs. That very same plant however, may become thoroughly unviable and perhaps even a stranded asset in the context of an upgraded system in the near future.

### **C. Limitations in the MCA Framework**

1. ACJCE had raised a number of concerns with the data requirements and criteria by which environmental impacts and socio-ecological harms were being calculated and accounted for in the pre-FS. In particular, we had emphatically cautioned against any piece meal and disjointed approach or a restrictive focus on carbon emissions or plant pollution control metrics to the exclusion of integrated, cumulative, and systems wide ecological effects. We had painstakingly explained the integrated nature of ecological processes and environmental systems as well as the science of interactive ecological effects from the harms associated with CFPP's, Gas, and hydro power systems. For instance, the nature of the impact of coal operations on groundwater systems in Thar was detailed with reference to not simply depletion of water resources, but also long term shifts in aquifer systems to the detriment of local community use patterns as well as contamination of drinking waters, along with reference to incidental air contaminants arising from waste water reservoir effects. However the result of our ample caution and detailed feedback is a paltry addition of "water stress" within the data requirements for an environmental assessment without any reference to the requirements of studying the integrated system wide impacts of fossil fuel operations as a whole.

This superficial analytic criteria has effectively excluded a range of environmental harms and potential risk factors from receiving any meaningful consideration in the MCA screening. This includes, amongst others, the following significant exclusions:

- a) Lack of attention to ecological impacts connected to coal mining operations. e.g Gorrano dam in Thar which serves as a reservoir for collecting waste water from the



mining process. This reservoir has poisoned the regions water, damaged plant life, and has no decommissioning plan. It is expected to turn into a saltpan upon cessation of use, at which point wind erosion processes will result in aerosol pollution of harmful salts and toxins in the surrounding villages. Similarly, the transport of coal is also associated with aerosol effect of coal dust. This is expected to rise rapidly with expansion of coal transport infrastructures. The ADB's narrow approach to emissions however fails to account for these interlinked aspects of fossil fuel operations. E.g the Bank believes that "plants with a high level of emissions per energy generated are more pollutant and therefore should be prioritised first", whereas the actual carbon footprint of projects can depend on a host of interactive factors and cumulative effects other than the per unit CO<sub>2</sub> emission of the power plant itself as discussed above.

- b) Flawed assumptions and insufficient metrics for assessing water stress. The present approach is to correlate water stress with the plant size of a CFPP. A better metric would be to consider water stress within the cumulative impact of coal infrastructures and practices for a more accurate empirical picture of actual stress exerted by fossil fuel activities on fragile water systems. Often times, the problems with "water stress" can turn not only in the amount of water consumed per unit and the regional scarcity or availability of water, but also the environmental footprint and sociological impact of coal-related water infrastructure projects themselves.
- c) Lack of attention to shortcomings in the approved EIA's or outdated standards in their emissions compliance and emissions controls arrangements. This is particularly true of some of the older plants.
- d) Failure to account for the actual status of on-ground environmental compliance of coal plants. There are significant questions about the gap between the emissions profiles as stated in the licenses and EIA's of plants and the actual environmental compliance and emissions load associated with the operation of various fossil fuel plants. The ADB however persists in utilizing a purely abstract model for assessing environmental impact as evidenced in its approach to emission mitigation technology. The draft MCA report states:

Plants contributing the most to air pollution through the of airborne toxins and pollutants released through their operations should be prioritised first for retirement. However, if the plant has air pollution control technologies in place, then it i assigned a score of 0 (lowest priority for retirement).

This approach completely fails to address the actual status of emissions and the state of the environmental controls through empirical data and monitoring stats. Such an empirical method is warranted for an accurate and realistic mapping of emissions to identify the highest and most harmful polluters. The present method runs the risk of underplaying the environmental risks associated with plants that may be emitting more than their profiles on paper would suggest.



- e) Inadequate analysis of the environmental standards in place for air and water quality and for emissions control of various candidate plants and their adequacy in light of contemporary international standards. This can lead to a failure to account for the potential impact of such a deviation in the environmental assessments of given plants. By way of illustration, consider that the Punjab and Sindh Environmental Quality Standards for PM 2.5 and PM 10 are much more lax than the standards developed by the World Health Organization (WHO). The same is true of water toxins standards and industrial effluent standards. Depending on the baseline state of the environment, the relative impact of certain additional toxins can therefore warrant a prioritization of some plants over others even where the emissions profiles and compliance would not suggest them as high polluters.
- f) Failure to consider the absence of certain environmental regulations which result in a dark figure on some pollutants. This can prevent accurate assessments of environmental harms associated with given plants. For instance, presently Pakistan lacks proper regulatory standards or a method of accounting for gas distributional losses making it impossible to ascertain the actual methane footprint for given projects. Similarly, there are no coal ash disposal regulations making it hard to gauge the relative levels and impact of coal ash leaching from different CFPP's. Distinguishing higher polluting from lower polluting plants between HCPP and CFPP's as well discerning between plants within similar fuel types is likely to be harder without a proper mechanism for accounting these factors (whether by proxy or by some empirical method).
- g) Impact of oxides and heavy metal toxin emissions on the range lands, food crop, and livestock have not been considered. Accurate analysis of the environmental problems associated with these factors requires a much deeper assessment than a mere accounting of total emissions. They may require context specific analysis to gauge the differential impacts of emissions on given topographies, land use patterns, and socio-natural processes. The relationship between the toxins released the nature of the socio-natural landscape in which they are released is often more telling in gauging environmental harms rather than isolated data on quantity of emissions. Put simply, not all emissions are equal in terms of the damage they can do.
- h) Long term shifts in the quantities, flow rates, and directions of underground water aquifers. Assessing this subtle impact of certain water intensive and waste water emitting power plants is crucial to ascertaining their true long term impacts. It is indeed possible that certain fuel plants may appear to have only a limited effect on water quality and quantity, but operations supporting its could have long term effects on water patterns to the detriment of local ecologies and social practices.
- i) Degradation of Land its impact on land use economies – including regional markets and local subsistence use economies – has not been adequately examined. At present a flawed water contamination proxy has been relied on to determine land degradation instead. (as detailed more fully in Section D).



2. There are similar flaws in the assessment of just transition factors. We had identified several loopholes and shortcoming in ADB's just transition assessment matrix in its initial MCA framework. Key amongst these was the absence of attention to the potential social benefits of retirements for local communities, as well as the need for restitution of affectees. We had also sought consideration of the social cost footprint of a plant i.e the social impact and compensation, resettlement, and rehabilitation costs in the assessment of economic viabilities of selected plants. For instance, the impact of land acquisition, livelihood costs of displacement, and compensation and resettlement costs associated with HCPP's and CFPP's must be factored into the just transition assessments. Plants that may score lower on environmental costs may in fact score much higher on social costs warranting their retirement on just transition grounds. It is the end "savings" to the Pakistani population from the retirement of this or that plant that matter in these assessments and that assessment will turn on an accurate picture of what their "real cost" is and has been to society. A just transition process pays due regard to this real cost.
  
3. Analyzing the various interactive effects of a hydro reliant energy system should be an important component of the systems assessment criteria as well as environmental assessment components for the ETM pre-FS. There are in fact several serious challenges associated with the manner in which fossil fuel reliance and hydro reliance can reinforce each other to destructive effect ecologically and in terms of security of supply. However, consistent with its avoidance of the Hydro question as outlined earlier, ADB merely glosses over this complex and highly significant issue with an off the cuff observation that

"Flexibility is expected to be provided by coal and hydropower in the future, particularly in the winter season when hydropower becomes less reliable. With GoP relying heavily on public sector hydropower development (which is slow) and attracting additional private sector investment (which is affected by the sector's ability to pay generators in full i.e. "Circular Debt") the government may need to rely more heavily on new thermal generation, which would complicate ADB's effort to demonstrate additionality of the planned ETM.""

The only reference to these challenges comes in a throwaway statement on the 'problem of additionality.' There is no attempt to detail the nature of this problem or to consider its system wide effects and implications for ETM. In particular, the report completely fails to undertake any meaningful analysis of the financial, technical, and ecological impacts of a hydro reliant power system within the context of climate change effects.

The nature of this interactive effect where increased hydro reliance could increase thermal reliance, requires specific and sustained analysis on how security of supply and ecological effects can both be co-implicated in wide scale processes such as climate change. In fact such interactive effects could cut across all the four pillars of the MCA – i.e. supply security, financial, just transition, and environmental impacts. For instance, costing the ecological



impacts of a hydro reliant power system would require attention to a host of factors including social displacement, reduced access to water for lower riparian regions, increased loss of Indus delta biodiversity and wildlife, increased risk of flooding, coastal water intrusion, loss of indigenous forests like mangroves, reduced groundwater recharge etc. Aside from costing these impacts, there is a need to consider the knock on costs from supply systems related effects. For instance, hydro's seasonal variability can compromise the reliability of the system – studies have predicted delays in the FY 2027. The delay also means an increased dispatch for Gas and Local Coal to fill in for the expected output of the Hydro power plants. Thus payments can be expected to surge in FY24 to more than PKR 70 billion on the back of these delays since energy must be arranged through expensive fossil fuels. Such costs need to be considered as system-wide concerns related to the interactions of fuel types and have implications for what an ETM should ideally be looking to address.

Additionally, with hydro driving an increased thermal reliance, climate change impacts could be amplified as a result of knock on effects. For instance, studies have shown that hydropower projects have historically been more vulnerable to extreme weather patterns and seasonal shifts that are sensitive to regional GHG levels. This vulnerability has increased exponentially with recent climate change patterns, the effects of which have been seen across the globe in the shape of droughts, shrinking rivers, extremes of high and low precipitation, and unpredictable reservoir levels. In Pakistan, last year's early onset summer and unprecedented heat waves saw alarming drops in the reservoir levels followed by the catastrophic floods later on. Several hydro-related infrastructural projects were destroyed or damaged in the flooding process. This was not a 'one off' event. Pakistan's recent history is littered with such incidents. According to recent studies, climate change is expected to drastically affect the availability and predictability of water as a resource for power generation with at least a third of glacial volumes expected to be lost in the coming decades. Thus we can expect an even more reduced and more unstable supply with diminished or unpredictable flow profiles in the coming years. If these interactive effects are not factored into assessments for the ETM, it will invite significant question marks on the net benefits of the ETM plan. This failure is symptomatic of a broader problem with uncritical methods and a non synergistic and piece-meal form of analysis in the present study. In this context, a truly effective ETM may need to focus on locational and time-defined combinations of halted projects, accelerated plant retirements, scale downs, and displacements, across hydro and fossil fuel plants rather than just HCPP or CFPP's.

4. Even otherwise, the criteria and methodology for just transition, and environmental harms is weak and limited as it includes no reference to independent studies on the socio-ecological harms of HCPP's and CFPP's. There are a range of studies detailing the short and long term effects of gas and coal operations for instance. These have neither been cited, nor included as a required literature review or state of the field within the stated scope of the study. The draft studies need to develop an independently reviewed bibliography of relevant literature and data before it can be expected to chart a viable and informed way forward.



5. The draft study is also severely flawed in its non-empirical approach to developing and outlining the MCA criteria. For instance, it includes no plans for field studies of the actual just transition needs of impacted communities and the ecological impacts related to CFPP's and has also consistently ignored evidence of gaps between the theoretical plans and actual on ground practices associated with emissions and mitigation methods and technologies. The same is true of the approach to the financial viabilities of specific plants
6. The Draft study provides no mechanism for how economic "costs" of ecological harms are to be arrived at in order to gauge the true financial impact of retiring a given high polluting plant or combination of plants. This is evident in the non-attention to the inter-play between the financial and environmental assessment factors. At present, the Financial viability scores are assigned scores separately based on fiscal factors like tariffs, cashflows, PPA tenures, price volatilities, FOREX reserves etc. Meanwhile Environmental factors are restricted to carbon and harmful oxides emissions, water stress, and water pollution factors. The draft MCA report therefore assigns scores under the financial and environmental pillars in isolated categories. For instance, the report claims that "environmentally damaging plants are prioritized for potential early retirement under the ETM" while simultaneously suggesting that "from the ETM's perspective, plants should be prioritized for early retirement if they have (i) strong cash flows, (ii) owners willing to sell the asset, as well as (iii) if they are costly for the national government to support through tariffs." This suggests that there is no methodology for assessing the long term financial impact of the "environmental damages" referred to. For instance, studies have demonstrated that in Thar, an estimated 1400 kg of mercury per year, will be deposited in the underground water aquifers as well as the surrounding crop and rangelands, endangering local food and water supplies and killing livestock. Similarly, the Thar mine and cluster of CFFPs are set to expose an estimated 100,000 people to exceedances of the World Health Organization guideline for 24-hour average SO<sub>2</sub> concentrations, and 3,000 people to exceedances of the guidelines for PM<sub>2.5</sub> concentrations. These will be responsible for a projected 29,000 air pollution-related deaths, over 40,000 asthma emergency room visits, 20,000 new cases of asthma in children, 32,000 preterm births, 20 million days of work absence and up to 57,000 years lived with disability related to chronic obstructive pulmonary disease, diabetes and stroke, over an operating life of 30 years for the CFPP's. There is no attempt to cost such health impacts, labor and food market effects, and environmental impacts to ascertain the true "financial viability" of retiring a given plant.
7. More generally the MCA criteria is unsupported by any effective integrative model for harmonizing between divergent findings under the different criteria. There is a complete lack of clarity on the criteria and balancing act by which weightage may be given to one criteria over another in practice. For instance, if a plant ends up scoring higher in the environmental and just transition pillars but lower on financial viability and is not selected, it is unclear why higher weightage should not have been given to the socio-ecological benefits of selecting it.



If the ultimate goal is to maximize benefits to the population at large in the long run, the method of “ranking” plants must be more nuanced and holistic with attention to appropriate time horizons for considering overall human welfare and local needs and priorities.

8. The exclusion of gas and RLNG run power plants from the considerations of the ETM mechanism by the ADB is arbitrary, unscientific, and structurally flawed. It flouts the available scientific and contextual evidence. The sensible path for the ADB would have been to analyze these plants as well from the prism of socio-economic, energy, and ecological considerations. However, by excluding them, the ADB has once again demonstrated where its loyalties lie, and most certainly, they are not towards the country whose vulnerability towards climate change is an undisputed fact. The most recent floods caused the country a loss of over 15 Billion US \$. Gas is certainly a part of the equation that led us down this path of destruction. It is established scientific knowledge that methane is a potent greenhouse gas (GHG), having 28 times greater global warming potential than carbon dioxide on a 100-year time scale and 84 times more potent on a 20-year outlook. Considering the mammoth share of gas in the total energy mix, the extraordinary recurrence of gas loss events, and the incapacitating LNG prices, it was only logical for the ADB to expand the scope of ETM and treat gas run power plants as candidate projects for retirements. The need to include gas run power plants in the ETM process is further reaffirmed by the fact that these plants face efficiency and financial losses due to partial load operation and open cycle operations of CCGT, as stated in the State of Industry Report 2022. In summary, the ADB's exclusion of gas and RLNG run power plants from the considerations of the ETM mechanism is unjustifiable, and the inclusion of gas run power plants in the ETM process is essential.

#### **D. Faulty Approach to Just Transition Assessments Leading to Non Selection of Thar Coal Projects**

1. ADB's evaluation and ranking of power plants in Tharparkar, maintaining that their impact on groundwater is low, flout the firsthand experience of us, the communities around power plants, lab results, and expert opinions about them. The lack of alignment between the ADB's calculations and the situation on the ground conspicuously shows the solid compromise on the part of the ADB to base its findings on just assessments. Water Test reports that have become part of the public domain and have been denounced in leading dailies, including Dawn (<https://www.dawn.com/news/1746173>), were analysed by Mehran University of Engineering and Technology's Soil and Water Pollution Control Laboratory, approved by the Sindh Environmental Protection Agency (EPA), as well as Dr. Mark Chernaik. Both note the presence of "excessive levels of selenium, arsenic, mercury, chromium, and lead in the underground drinking water of Block II power plants" and claim that they are of recent origin, associated with coal activities in the Thar coalfields are unfit for human consumption. The reported numbers of 9 different samples collected from 9



different locations pose a serious threat to the health of local populations. Across the six locations:

- Lead levels were found to be more than 7 times higher than WHO standards and also in excess of Sindh standards.
- Mercury levels were found to be 19 to 95 times higher than WHO and Sindh standards.
- Selenium levels were found to be 6-20 times higher than WHO standards and Sindh Standards.
- Arsenic levels were found to be 2 times higher than WHO standards.

2. In the presence of such data it become imperative for the Bank to reevaluate the impacts of Thar based power plants on the ecology, cultural and other socio-economic practices of communities around them and pose at least one of the power plants in Thar for immediate retirement. The Bank can access the report from the following link :[/https://acjce.com/wp-content/uploads/2023/04/ELaw-Water-Test-Interpretation.pdf](https://acjce.com/wp-content/uploads/2023/04/ELaw-Water-Test-Interpretation.pdf)
3. *Coal-mining has been excluded from the study's scope:* A number of the social, economic and environmental problems being faced by locals in Thar stem from ongoing coal-mining operations in Thar whereas the ADB-led pre-feasibility study has excluded the effects of coal mining from its scope.
4. *Parameters and scope for a just transition assessment of coal-based thermal power plants are inadequate and insufficient:* As earlier mentioned, the present data and analytic parameters for the assessment of environmental impact of coal-fired power plants is restricted to CO<sub>2</sub> emissions, water stress and air pollution metrics. These parameters are wholly insufficient as they omit significant parameters including, for instance, water contamination, land degradation, long term changes in aquifer flows, local weather changes etc. The health costs, biodiversity losses and long term cumulative and interactive effects of different environmental factors associated with coal mining and coal-fired power plants must also be accounted for in order to develop a sufficient assessment of environmental costs. These factors are especially relevant when considering their interactive relationship with sociological factors such as land loss, displacement, livelihood disruption and intangibles such as cultural disruption.
5. *Draft study and consultation process ignore the spirit and principles of climate justice:* We believe that the question of energy transition is an issue of climate justice. Restitution and



rehabilitation of the victims of fossil fuel usage must, therefore, be a high priority. Full participation of communities affected by coal or any other fossil fuel and prioritization of their perspectives are indispensable for designing and carrying out any study on energy transition mechanisms. Their input must also find meaningful incorporation in the design of the consultative process, in the accountability mechanisms and in the transparency, scope, methodologies and execution of the actual study. ADB's pre-feasibility draft study purports to address matters of just transition and climate justice but in practice it has entirely ignored or disregarded our input even though we have been directly impacted by coal-fired power plants.

6. *Draft study has systematically excluded the full range of socio-ecological and cultural impacts of coal on Thar's indigenous communities from the scope of its analysis:* As described at length, coal-mining and coal-fired power plants in Thar have resulted in a number of social impacts on local communities but these impacts remain unaddressed under the framework suggested by the draft study. This is against the spirit and principles of a just transition.

A number of reports and studies have been carried out on the environmental impacts of Thar coal projects on local land, water and air. The draft study makes no mention of any of these studies and fails to account for their various findings.

7. *Secondary data used for the study is outdated and inappropriate:* The data used in the draft study, is frequently drawn from outdated or inadequate sources. In fact the water contamination data has been taken from the country-wide generic statistics, containing no information about the actual empirical impacts of coal power projects on local water bodies. The Bank notes that

A study titled *Pollution Status of Pakistan: A Retrospective Review on Heavy Metal Contamination of Water, Soil, and Vegetables* identifies the concentrations of arsenic, cadmium, chromium, nickel and lead in groundwater across regions in Pakistan. The following table summarises the metal concentrations in the provinces that are the focus of this study - where CFPPs/HCPPs are located within the NTDC system (Punjab, Sindh, Balochistan)

It goes on to provide a province-wise breakdown of the heavy metal levels. The study however dates back to 2014 prior to the impact of Thar Coal operations in Sindh. It also takes a macro outlook, seeking broader provincial patterns rather than studying site specific and industry specific effects. Reliances on such weak secondary data for the draft study is not only inappropriate and inadequate for the task, but also misleading. A better method would have been to study the baselines for a defined region in the proximity of Thar coal operations and then note deviations and trends across various months of operation. Dispersal



modeling may then be utilized to extend the trend lines to project across the PPA period. In addition, the report also fails to assess the costs associated with the health effects that are stated in the study it relies on.

## E. Recommendations

It is clear that the present process and design of the pre-FS is unsuitable for an effective ETM plan. At this stage we recommend the following measures to course correct for more optimal outcomes:

1. Revise the timelines of the project. The pre-FS exercise must be extended by at least twice the present duration to have any chance of an effective design.
2. Expand the scope and budget for the pre-FS. A wider scope and TOR's is necessary for the kind of analysis needed to develop a meaningful, effective, and sustainable ETM plan.
3. Overhaul the MCA framework to include more robust criteria on all four pillars with deeper attention to interactive effects and the interplay between different criteria.
4. Include a methodology for economic costing of social and environmental effects of high polluting and ecologically destructive plants.
5. Develop a method for balancing the demands of the four criteria under the MCA in an integrated and synergistic manner.
6. Reform consultative practices and adopt a set of mutually acceptable guidelines and systems of accountability for the incorporation of CSO input.
7. Center the perspective of climate affected communities in the designing of the pre-FS. Revise the inception report in line with this input.
8. Include Gas projects within the scope of candidate HCPP's.
9. Include large Hydropower plants within the purvey of the ETM.
10. Include the Jamshoro Coal plant as a pre-selected project earmarked for retirement with ADB funds. ADB must take a leading role in accepting its institutional responsibility in perpetuating climate irresponsible practices. As a major financier and facilitator of the said coal plant, it must set a positive precedent in responsible climate action by undoing the harms of its risky choices and initiating meaningful course correction.

**Note 1:** *As ACJCE has requested a consultative meeting for clarifying various aspects and features of the draft studies and inviting a more meaningful exchange of perspectives, we therefore request an opportunity to send a revised version of these comments at a reasonable time after such a meeting has been held.*



Alliance for  
Climate Justice &  
Clean Energy

**Note 2:** This assessment is a collaborative exercise by ACJCE involving the input of international and local academics, activists, climate and fossil fuel affectees, and experts from the scientific, legal, and environmental fraternities

The following member organizations of the Alliance for Climate Justice and Clean Energy (ACJCE) have endorsed these comments:

S#	Organization Names	Logos
1	Indus Consortium for Humanitarian, Environmental And Development Initiatives	The logo for the Indus Consortium features the word "Indus" in a blue script font and "Consortium" in a red serif font, with the tagline "for Humanitarian, Environmental & Development Initiatives" below.
2	Alternative Law Collective	The logo for the Alternative Law Collective consists of a white circular emblem with a scale of justice, set against a black square background with the text "ALTERNATIVE LAW COLLECTIVE" in white.
3	The Knowledge Forum	The logo for The Knowledge Forum features the words "THE KNOWLEDGE FORUM" in a blue, sans-serif font, with a horizontal blue bar above the word "KNOWLEDGE".
4	Policy Research Institute for Equitable Development (PRIED)	The logo for the Policy Research Institute for Equitable Development (PRIED) features the acronym "PRIED" in a blue, sans-serif font, with a small circular icon to the left.
6	Lok Sujag	The logo for Lok Sujag is a large, intricate orange mandala-like pattern with a central white dot.