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Subject: Comments upon Staff Paper on Market Coupling by Central Electricity Regulatory Commission published in August 2023

Views/Comments upon Staff Paper on Market Coupling by Central Electricity Regulatory Commission published in August 2023

CERC has published the "Staff Paper on Market Coupling" in August 2023 inviting comments/views from the stakeholders. In response Revayu Systems Private Limited likes to offer its views on the issues and questions highlighted in the discussion paper w.r.t to renewable power generation companies. We submit that we do not support the proposal of market coupling.

The argument for market coupling is primarily focused on three key objectives which are determining single price, improve transmission corridor management & availability and maximize the social welfare. However, market coupling requirements as per the issues highlighted by hon'ble commissions require an extensive examination. Market coupling as a concept was introduced in Europe in 2006 but in a phased manner with transnational merger happening between countries of France, Belgium, and the Netherlands. Subsequently, 15 different European countries introduced a nation-wide market coupling in the year 2014. By 2023 the European electricity wholesale market is highly integrated with 27 countries & 30 transmission system operators participating in market coupling. The prime objective behind coupling of power exchanges in Europe was to integrate market of different countries & thereby leading to optimization of cross border transmission infrastructure with respect to both capacity allocation and congestion management and achieving the same by price convergence of electricity between the integrated markets. However, if the same rationale is applied for India, it will be a flawed structure for the reason being there are multiple prices that prevail in the country which stand unique to each power purchase agreements (PPA).

In the Indian context coupling will not create any additional value as the country has a voluntary market model in line with power market regulations where multiple power exchanges operate and compete at national level and therefore provide scope for trade in various products in the market. As a downside of coupling, it will increase operational cost, make access to market difficult, create unwarranted rigidities & stifle innovations in the market there by defeating the very purpose of the reforms that were brought by EA 2003.

In the Indian context the objectives of market coupling seem already being achieved as all the regions and states are integrated geographically. The price coupling of power exchanges in India will undo all the progress and market development which introduced open access, efficiency, transparency and healthy competition will all be diluted.

Therefore, the proposal to introduce market coupling seems a non-starter as it is neither beneficial for the generators or investors or for the market while requiring significant fundamental and structural changes.

Summary of Views – Impact of Market Coupling on RE Power Gencos:

1. The green short-term market development will be curtailed as investments in merchant RE plants would dwindle post coupling: As market coupling in India is oriented towards price pooling of power exchanges that would have a direct negative impact upon the revenue streams of merchant renewable energy projects. It is simply for the fact that if the prices are pooled it could potentially mean competing with generators whose fixed cost is already protected through long term PPAs. This may lead to lower prices for the energy generated by the merchant renewable plants and the business case shall be challenged. Further, this signal would be discouraging for the investors to put money in renewable merchant power plants as the ROI would be completely unattractive. Additionally, uncertainty in the market would be a direct deterrent for short term market development, especially in the case of merchant renewable generation which is heavily reliant on the concurrent regulatory and policy dynamics.

Furthermore, since the proposal of coupling is a precursor to MBED wherein though RE projects will get priority of scheduling however, due to rigidity of MBED these projects will not be able to revise their schedule in real time which will impact returns in terms of increased forecasting error. This will impact existing projects and upcoming projects.

2. Future RE products like CFD and VPPAs which were key to RE market development in the country may be impacted due to market coupling: CFDs and VPPAs have been instrumental for India in providing renewable projects certainty for consistent revenue flows which eventually becomes a crucial factor for driving investments. These mechanisms are designed in a way that allow the developers to secure the fixed price for the energy they produce which helps them to counter the risk of price fluctuations. In a scenario post market coupling the chances for a lower market price of electricity becomes higher which may make it more challenging for projects reliant on CFDs and VPPAs to secure favorable terms purely for the fact that the gap between market prices and the agreed upon prices for such contracts would dwindle and become narrower. However, ultimately the impact would depend upon how the market evolves post coupling which would be heavily dependent upon the way it is implemented.

3. There would be revenue cannibalization risk imposed for RE generation companies post market coupling: Revenue cannibalization will evolve as a significant risk for companies in RE generation post market coupling. The revenue cannibalization occurs when market price of electricity falls due to an increase in the share of RE sources in the generation mix. As RE capacity increases the additional supply can potentially lead to lower market prices which in turn may reduce the revenue earned by RE generation companies. Post introduction of market coupling this risk could further aggravate and lead to a scenario where the prices received by RE generators are further compressed impacting the financial viability of existing projects and impacting investments in the future RE projects.

4. Market coupling can disrupt the subsidy models on offer to RE generation companies which may act as a deterrent to new project financing: The market coupling of power exchanges can act as a deterrent to new project financing and potentially would disrupt the subsidy models offered to RE generation companies. In India, many renewable projects rely on subsidies and incentives provided by the Government at the concurrent levels to make them financially viable. These subsidies often take the form of Feed in Tariffs, tax incentives & holidays, reduced price for land leasing and other

financial support mechanisms. However, post market coupling chances for lower market prices would be higher which in turn would reduce the gap between market prices and the guaranteed prices offered through subsidies. This would have a clear negative impact on the economic feasibility of such RE projects which are planned on subsidies.

Further, the chances of creation of stranded assets may be higher for the existing projects and limitation of project financial viability for the upcoming ones would lead to project delays and subsequent cancellations which can reduce the investments in RE segments impacting the growth momentum and the planned capacities.

5. Market uncertainties introduced by market coupling may lead to RE project delays and eventually may slow down the green energy transition progress of the country: Post market coupling the regulatory uncertainty introduced can lead to a "Wait & Watch" approach amongst the developers and investors which will directly impact the investment flows until there evolves greater clarity on the market uncertainties. Also, for the RE project developers the revenue streams would stand unpredictable which will induce uncertainty for the developers and investors to commit capital to the projects which have uncertain returns commitment. This eventually will slow down the transition of country towards green energy.

6. Possibility of monopolistic practices may get enhances favoring few dominant generating companies: Post market coupling of exchanges the possibility of monopolistic behavior of the market will get enhanced as the market power would get concentrated in the hands of dominant generating companies (few government PSUs) which will limit the potency of smaller RE generation companies in the country. This is for the fact that the smaller RE generation company may have limited resources and market presence which would restrict their potential to compete with larger companies, thereby reducing the innovation & diversity in the sector.

7. The economic viability of energy storage might be challenged which may hinder the growth momentum of RE players: As post market coupling the integration of renewable energy into the grid will become further complex especially in the case if there are discrepancies in generation patterns across different regions. This would demand enhanced infrastructure & energy storage solutions on a larger scale. This would mean that the overall costs for integrated renewable energy project with storage solutions will make the RE projects less competitive in a price pooled market. Therefore, the economic viability of energy storage projects would be negatively impacted and would lead to a cascading effect on the growth trajectory of renewable market in the country.

8. Direct impact on PPAs would impact project financing of RE projects: Direct impact upon PPAs would translate directly into securing project financing for RE projects in a post market coupling scenario as the proposal of coupling is deemed as precursor to Market Based Economic Dispatch (MBED), wherein RE projects will get priority in scheduling courtesy no variable charge. However, due to lack of flexibility in the MBED mechanism the RE projects will not be able to revise their schedule in real time which will impact the returns due to induced forecasting errors. This will have a comprehensive impact upon both existing & upcoming projects.

In view of the above, the Hon'ble Commission is requested to assess the need of such a disruption by conducting a detailed independent study on the market design. The market design should reflect the current need of the power sector and should be conducive for all the stakeholders.

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